Aluminum statistical review for 1982

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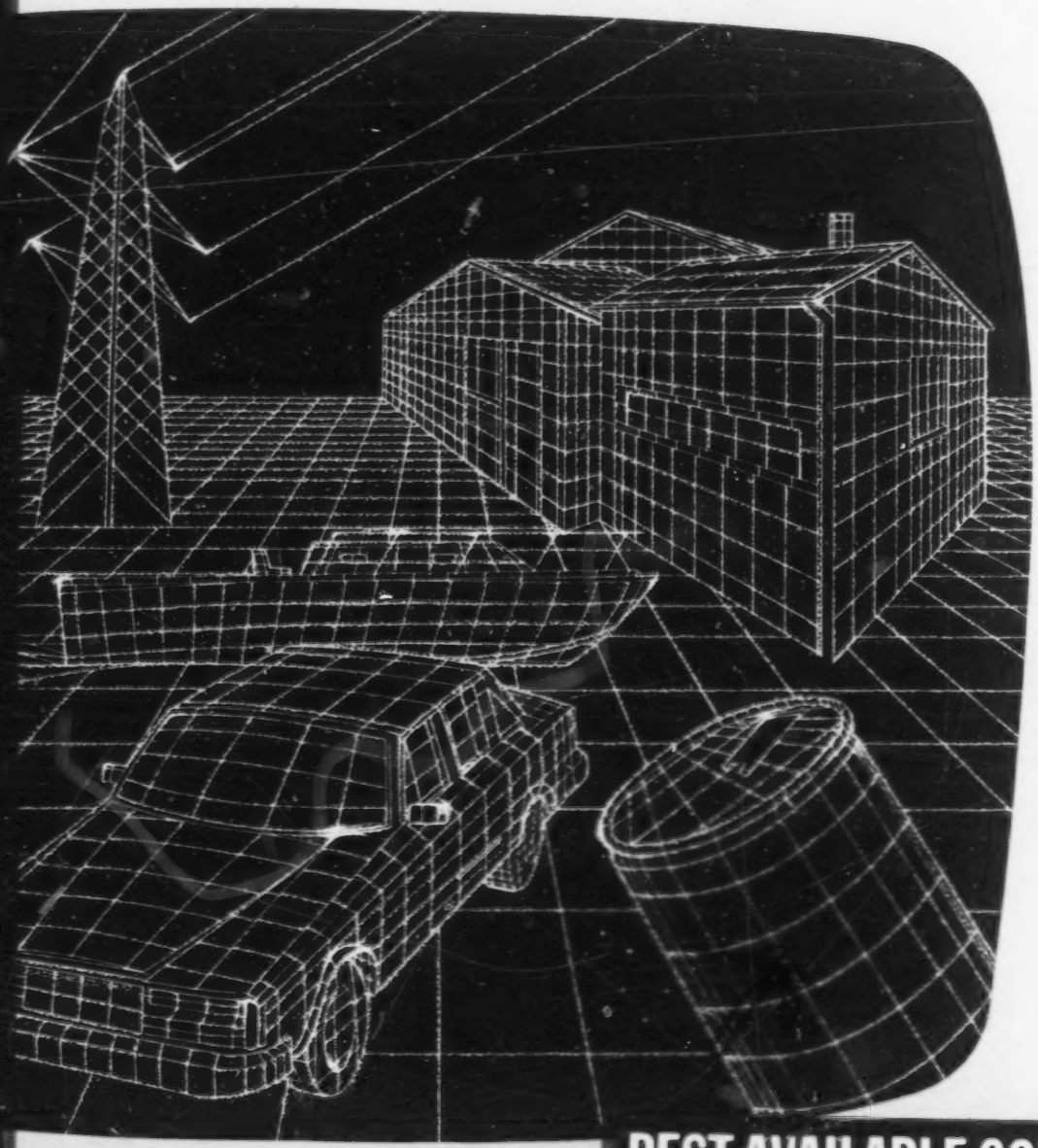

Aluminum statistical review for 1982

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Contents

The Aluminum Association does not warrant the accuracy or completeness of any data in this Review. All data contained herein are subject to revision.

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Introduction 2
Capsule Review 3

Shipments

Total Industry Shipments 5
Imports of Mill Products 5
Shipments of Ingot & Mill Products 6
General Line Distributor Shipments 7
Shipments of Castings 8
Seasonal Adjustment Factors 9

Markets

Shipments by Major Market 10
Product Shipments by Major Market 13
Trends in Selected Markets 18

Supply

Introduction 21
Total Supply 22
U.S. Suppliers' Inventories 24
Total Supply Adjusted for Stockpile 24
Production of Primary Aluminum 25
Primary Aluminum Capacity 26
Number of Plants in the United States 27
Geographic Distribution of Aluminum Plants 27
Aluminum Scrap-Consumption and Recovery 30

U.S. Foreign Trade Statistics

Introduction 33
U.S. Imports & Exports 36
U.S. Imports by Product and Country 38
U.S. Exports by Product and Country 40

World Statistics

Introduction 43
World Primary Aluminum Production 44
Aluminum Supply & Apparent Consumption—Selected Countries.. 46

Glossary 62

Publications 64

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Introduction to Aluminum Statistics

Alumina is "reduced" to aluminum through an electrolytic process. Potlines such as this one operate 24 hours a day, seven days a week.

The Aluminum Association's Statistical Review assembles in one place the most important data available on the aluminum industry. It includes information on every cycle from production of primary aluminum to markets for finished goods.

The Review is divided into five major sections: Shipments, Markets, Supply, U.S. Foreign Trade, and World Statistics. Each major section is preceded by an introductory statement generally describing the tables that follow. Each graph or table has a description and highlights. The Review shows detailed shipment figures for twenty three separate product categories. A glossary of industry terms is appended.

Aluminum industry net shipments* of 12,154 million pounds in 1982 showed a decline of 9.8 percent from 1981.

Containers and packaging continued to be the industry's leading market with a volume of 3,568 million pounds, or 29.4 percent of total 1982 shipments. It registered an increase over 1981 of 1.6 percent.

Building and Construction, the second largest market in 1982 with 2,280 million pounds, declined 9.8 percent from 1981. Shipments to the Transportation market declined 18.1 percent, and totaled 1,755 million pounds or 14.4 percent of total shipments.

The Electrical market showed a 15.1 percent decline vs. 1981 with a volume of 1,132 million pounds. The Consumer Durables market registered a 20.7 percent decrease to a 775 million pound volume in 1982.

* "Net" shipments exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

Shipments to the nonelectrical Machinery and Equipment market were down 22.4 percent and shipments to "Other" or miscellaneous identified markets declined 10.0 percent.

Total shipments to domestic markets at 10,859 million pounds were down 10.3 percent from the 1981 level of 12,108 million pounds. Exports dropped 5.5 percent from their record volume in 1981.

The United States supply of aluminum in 1982 at 13,032 million pounds was down 16.3 percent. Domestic primary production declined 27.1 percent to 7,217 million pounds. Primary imports decreased 4.4 percent while imports of mill products went up 49.9 percent. Domestic recovery from scrap accounted for 4,000 million pounds, a 1.4 percent increase.

The U.S. was again a net importer of aluminum in 1982, with imports exceeding exports by 243 million pounds. Total imports increased 3.8 percent to 1,967 million pounds while exports declined 7.0 percent to 1,723 million pounds.

Supplier's inventories declined 407 million pounds by year-end to 6,199 million pounds. Additional inventory data are presented on page 24.

The data in this REVIEW were developed by the Statistical and Marketing Research Committee of the Aluminum Association, Inc. with the kind cooperation of the following organizations: National Association of Aluminum Distributors; the Bureau of Industrial Economics and the Bureau of the Census, U.S. Department of Commerce; and the Bureau of Mines of the U.S. Department of the Interior.

Aluminum Association staff members, George Van Buren Day, Nicholas A. Adams, Jr., and Harriet Rusk prepared the REVIEW for publication.

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Aluminum Statistical Review-Historical Supplement

Historical tables covering the years 1960-1980 with some tables covering years prior to 1960.

Contact the Aluminum Association for further information.

Capsule Review

Millions of Pounds	1982	1981
Total Supply	13,032	15,567r
Primary Production	7,217	9,896
Primary Capacity (Year-end)	11,064	11,007
Shipments to Major Markets		
Building & Construction	2,280	2,529
Transportation	1,755	2,143
Consumer Durables	775	977r
Electrical	1,132	1,333
Machinery & Equipment	653	841
Containers & Packaging	3,568	3,512r
Other	696	773r
Total Domestic Shipments	10,859	12,108r
Exports	1,295	1,370
Total Shipments	12,154	13,478r

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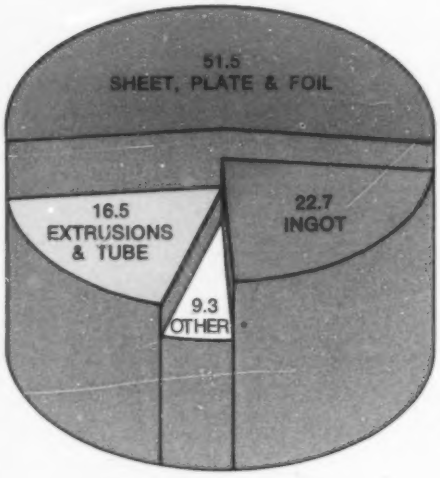
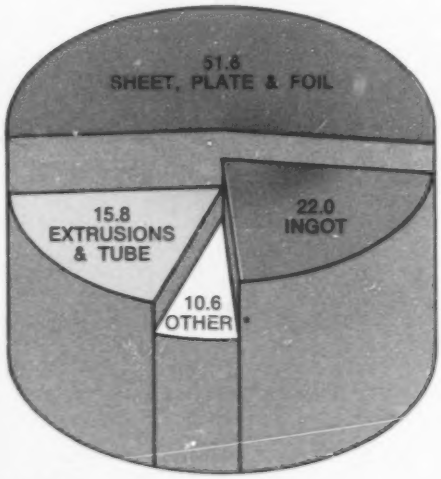
U.S. Aluminum Industry Shipments

Percentage Distribution by Major Products: 1982



Percentage Distribution by Major Products: 1981



** Other*

Conductor	*5.3 (5.3)*
Rod, Bar, Wire, Forgings & Impacts	*2.9 (3.6)*
Powder	*0.7 (0.8)*
Welded Tube	*0.4 (0.9)*

NOTE: 1981 percentages are shown in parentheses

SHIPMENTS DOWN 9.8%

Total net shipments in 1982 amounted to 12,154 million pounds, 9.8 percent lower than the 13,478 million pounds shipped in 1981.

The adjacent chart shows that the largest product category of sheet, plate and foil represented 51.5 percent of total shipments in 1982 (51.6% in 1981). Ingot for castings, destructive uses and exports accounted for 22.7 percent (22.0% in 1981) and extruded products and tube shipments were 16.5 percent (15.8% in 1981) of total shipments.

Including net imports, sheet and plate and foil volume of 6,438 million pounds were down 8.6 percent from 1981. Extruded products and tube shipments totaled 1,942 million pounds, down 2.3 percent from 1981.

Total shipments to U.S. consumers at 10,859 million pounds were down 10.3% from the 1981 level of 12,108 million pounds. Exports dropped 5.5 percent from their 1981 level of 1,370.

DESCRIPTION:

Total aluminum industry shipments presented on the next page are net shipments to U.S. consumers and for export. To avoid duplication, the figures do not include any intra-industry shipments for further fabrication into mill products. Imported ingot and mill products shipped to U.S. consumers are included.

Net shipments of ingot include domestic and import shipments and represent primary and secondary ingot shipments for export, for castings and destructive uses. Net shipments of mill products are shown separately for domestic and import. Mill product imports to aluminum producers are not included in total industry shipments. These imports are further processed by the producer into another mill product which is included in the total.

Imports to consumers are included in total industry shipments. These consumers fabricate the aluminum into a finished product. Imported mill products are net of receipts by producers of mill products. Imported mill products data include reimports of metal exported for processing and returned for further processing.

The pie charts illustrate the distribution of net shipments of aluminum ingot and mill product groups during 1981 and 1982. They include net shipments of ingot and domestic mill products but exclude imported mill products, because import data are not available in the same detail as domestic shipments of mill products. The distribution is based on data shown on page 6. The imported mill products are shown on page 5.

For information on years prior to 1972 see the Aluminum Statistical Review—Historical Supplement.

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Total Industry Shipments 1972-1982

Millions of Pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Net Shipments											
Total	12,154.1	13,477.5r	14,199.5	14,867.3	14,425.3	12,986.0	12,425.1	9,928.5	13,730.2	14,684.5	12,046.6
Ingot	2,667.2	2,908.6r	3,572.3	3,287.0	2,672.3	2,388.3	2,540.1	2,377.7	3,178.4	3,668.4	2,633.8
Mill Products											
U.S. Producer	9,098.9	10,328.5r	10,484.9	11,230.4	11,346.0	10,442.9	9,705.6	7,426.6	10,461.0	10,899.8	9,246.3
Imported	388.0	240.2	142.3	349.9	407.0	154.8	178.3	124.3	90.8	116.2	166.5
U.S. Exports	1,294.7	1,370.0	2,193.3	1,022.9	747.4	712.2	820.5	805.0	927.1	925.2	552.1
U.S. Consumers (1)	10,859.4	12,107.5r	12,006.2	13,844.4	13,677.9	12,273.8	11,604.6	9,123.5	12,803.1	13,759.3	11,494.5

Detail may not add to totals due to rounding.

SOURCES: Current Industrial Report Series M33-2. Mill products, exports, imports: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division, and CIR Series M33-2.

(1) Shipments to consumers in the U.S. are calculated by subtracting exports of ingot and mill products from total industry shipments. Includes no adjustment for inventories in the hands of consumers.

Mill Products Imports 1972-1982

Millions of Pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Total Imports (1)											
Total	455.6	303.9	168.1	426.3	484.5	164.8	189.0	130.2	109.7	138.2	188.9
Sheet & Plate	414.8	247.1	126.1	357.3	433.7	128.7	150.5	107.1	69.7	99.5	138.5
Rod & Bar	10.1	34.2	16.3	38.0	22.1	18.1	20.9	12.7	18.8	13.2	16.8
Other	30.7	22.6	25.7	31.0	28.7	18.0	17.6	10.4	21.2	25.5	33.7
Imports to Consumers (1)											
Total	388.0	240.2	142.3	349.9	407.0	154.8	178.3	124.3	90.8	116.2	166.5
Sheet & Plate	357.7	205.6	115.7	317.0	371.0	124.7	144.8	106.5	53.9	80.1	117.2
Rod & Bar	1.3	12.3	9.1	2.2	9.7	12.4	16.1	7.3	15.7	10.6	15.6
Other	29.1	22.3	17.5	30.7	26.3	17.7	17.3	10.4	21.2	25.5	33.7
Imports to Producers (2)											
Total	67.6	63.7	25.8	76.4	77.5	10.0	10.8	5.9	18.9	22.0	22.4
Sheet & Plate	57.2	41.5	10.4	40.3	62.7	4.0	5.7	0.5	15.8	19.4	21.2
Rod & Bar	8.8	21.9	7.2	35.8	12.4	5.7	4.8	5.4	3.1	2.6	1.2
Other	1.6	0.3	8.2	0.3	2.4	0.3	0.3	*	—	—	—

**Less than 50 thousand pounds.*

Detail may not add to totals due to rounding.

(1) Starting in 1970, includes reimports of metal exported for processing and returned for further processing (TSUSA 806.30)

(2) Product detail estimated by Aluminum Association from published ranges

SOURCES: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division and CIR Series M33-2

Shipments:

Net Shipments of Ingot and Mill Products
Excludes Mill Product Imports to Consumers

Millions of Pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Total Aluminum	11,766.1	13,237.1r	14,057.2	14,517.3	14,018.4	12,831.3	12,245.6	9,804.2	13,639.5	14,568.2	11.880.0
Total Ingot	2,667.2	2,908.6r	3,572.3	3,287.0	2,672.3	2,388.3	2,540.1	2,377.7	3,178.4	3,668.4	2,633.8
Primary	1,521.5	1,485.3r	1,958.3	1,281.2	923.3	768.5	1,108.5	1,275.0	1,503.5	1,615.7	1,000.7
Secondary (1)	1,474.6	1,704.5	1,582.1	1,830.7	1,658.7	1,443.6	1,227.6	1,019.1	1,457.4	1,757.8	1,467.9
Extrusion (2)	(328.9)	−281.2r	32.0	175.1	90.3	176.2	203.9	83.5	217.4	294.9	165.2
Total Mill Products	9,098.9	10,328.5r	10,484.9	11,230.3	11,346.0	10,443.0	9,705.6	7,426.6	10,461.1	10,899.9	9,246.2
Sheet											
nonheat-treatable	4,976.9	5,504.0r	5,301.8	5,632.8	5,785.4	5,505.5	5,167.0	3,676.8	5,087.9	5,308.7	4,431.4
heat-treatable	150.1	200.9r	247.3	365.4	350.0	300.4	191.9	121.0	216.5	203.3	160.6
Plate											
nonheat-treatable	70.9	106.1	92.2	114.9	116.1	104.2	108.4	143.2	157.2	109.7	78.8
heat-treatable	131.2	167.1	220.9	183.5	157.1	130.3	106.5	111.2	164.6	119.6	97.1
Foil	731.2	850.4r	830.4	887.0	876.6	805.6	772.3	611.8	748.2	774.4	673.2
Extrusions											
Rod & Bar (6)	93.9	102.9r	113.0	100.9	113.7	82.5	69.9(6)	67.8	63.7	67.2	57.1
soft alloys		—	—	—	—	—	—	55.7	48.8	48.3	40.5
hard alloys		—	—	—	—	—	—	12.1	14.9	18.9	16.6
Shapes (5)											
soft alloys	1,654.8	1,732.9	1,791.2	1,990.1	2,021.9	1,845.5	1,661.8	1,264.3	1,807.3	2,038.6	1,838.4
hard alloys	48.5	69.9	107.3	104.2	93.2	65.4	28.9	47.7	66.4	72.2	44.6
Pipe & tube	80.6	112.1	140.7	151.9	176.8	183.8	188.8	135.9	219.4	225.6	193.8
Drawn tube (7)	60.9	74.6	80.7	95.9	106.7	104.3	98.0	65.7	110.4	110.3	92.8
soft alloys		—	—	—	—	—	—	—	—	105.7	89.1
hard alloys		—	—	—	—	—	—	—	—	4.6	3.7
Welded Tube	47.9	114.2	96.8	83.5	110.4	114.5	94.2	61.6	116.8(7)	121.7	116.6
Bar & Rod	190.4	272.0r	377.6	300.0	266.5	145.6(3)	279.9(3)	185.8	268.6	289.4	181.5
Wire, bare	50.8	68.3	72.2	91.3	89.3	85.3(3)	79.9(3)	66.3	131.0	124.1	106.6
ACSR & bare cable	345.2	378.7	399.8	417.4	390.3	351.0	321.4	425.1	541.4	490.2	453.6
Insulated wire & cable	281.3	327.5	363.2	427.5	419.6	376.7	304.1	246.3	446.3	445.2	371.0
Powder & Paste (4)	89.0	107.7r	116.6	125.6	135.9	121.1	132.4	98.9	177.2	257.4	226.4
Forgings	78.9	109.2	107.2	127.4	115.7	105.7	83.1	82.8	112.8	114.8	95.3
Impacts	25.3	29.8	26.0	31.4	20.7	15.6	17.1	14.4	25.5	27.6	27.5

SOURCE: U.S. Department of Commerce, Bureau of The Census and Bureau of Industrial Economics, Office of Basic Industries—Current Industrial Reports.

(1) Secondary ingot includes shipments by integrated companies, secondary smelters and imports.

(2) Extrusion ingot includes primary and secondary metal shipments by integrated companies, non-integrated companies, secondary smelters and imports. Includes exports and overstated domestic shipments due to insufficient reporting of receipts.

(3) Bare wire estimated by the Aluminum Association from part year reporting.

(4) Powder, n.e.c., included for only nine months of 1976 and excluded entirely for 1977 to date.

(5) A small amount of rolled structural shapes is included with extruded shapes.

(6) Extruded Rod & Bar—soft and hard alloys combined 1976 to present.

(7) Drawn tube—soft and hard alloys combined 1974 to present.

Detail may not add to totals due to rounding.

General Line Distributor Shipments

DISTRIBUTOR SHARE 31.3%

During 1982, distributors captured 31.3 percent of their available market. Total U.S. shipments of mill products, excluding direct mill uses, was 3,198 million pounds, down 16.6 percent from 1981. Distributor shipments at an estimated 948 million pounds were down 21 percent from a year ago. Shares declined in three product groups but increased in plate and pipe & tube.

DESCRIPTION:

The table shows general line distributor shipments as estimated by the Management Information Committee of the National Association of Aluminum Distributors for the years 1972-1982. Also shown are estimates of the total market in which general line distributors are participants. This is labeled Total U.S. Shipments, excluding Direct Mill Uses.

For information on years prior to 1972, see the Aluminum Statistical Review—Historical Supplement.

Direct mill uses are excluded because these end product manufacturers do not buy from distributors. In some cases producers make the final products. These uses include residential siding, extruded shapes for all building products, furniture tube, conduit, irrigation pipe, can stock and exports. Total U.S. shipments excluding direct mill uses thus differ from total aluminum industry shipments of mill products by the amount of direct mill uses and products not generally handled by general line distributors (foil, conductor, forgings, powder).

General Line Distributor Shipments
1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Distributor Shipments											
Total	948	1,200	1,274	1,359	1,319	1,212	1,148	753	1,195	1,210	953
Sheet	598	778	747	816	812	758	753	435	708	738	566
Plate	104	120	155	152	138	112	92	77	128	106	80
Rod, bar & wire	106	140	161	176	161	137	116	85	134	142	109
Extruded shapes	94	107	151	149	138	136	121	105	147	149	136
Pipe & tube	46	55	60	66	70	69	66	51	78	75	62
Total U.S. Shipments excluding Direct Mill Uses											
Total	3,198	3,835r	3,832	4,327	5,095	4,442	4,158	2,903	4,600	5,023	4,155
Sheet	2,056	2,484r	2,302	2,598	3,359	3,013	2,772	1,842	2,911	3,370	2,832
Plate	189	240	266	281	253	215	196	210	295	213	167
Rod, bar & wire	275	331r	379	407	398	286	376	257	418	420	316
Extruded shapes	589	632r	710	859	864	741	662	487	782	792	625
Pipe & tube	89	148	175	182	221	187	152	107	194	228	215
Distributor share (per cent)											
Total	29.6	31.3r	33.3	31.4	25.9	27.3	27.6	25.9	26.0	24.1	22.9
Sheet	29.1	31.3r	32.5	31.4	24.2	25.2	27.2	23.6	24.3	21.9	20.0
Plate	55.0	50.0	58.3	54.1	54.5	52.1	46.9	36.7	43.4	49.8	47.9
Rod, bar & wire	38.6	42.3r	42.5	43.2	40.4	47.9	30.9	33.1	32.1	33.8	34.5
Extruded shapes	16.0	16.9r	21.3	17.4	16.0	18.4	18.3	21.6	18.8	18.8	21.8
Pipe & tube	51.7	37.2	34.3	36.3	31.7	36.9	43.4	47.7	40.2	32.9	28.8

NOTE: In this table rod, bar and wire includes extruded rod and bar; pipe and tube includes extruded, drawn and welded pipe and tube
SOURCE: Estimated by the Management Information Committee of the National Association of Aluminum Distributors

Shipments of Castings

SHIPMENTS DOWN 17.3%

There were 1,306 million pounds shipped during 1982 versus the prior year's 1,580 million pounds. Of the total shipments, die castings accounted for 62 percent (60 percent in 1981), permanent mold castings, 18 percent (22 percent in 1981), sand castings, 17 percent (16 percent in 1981) and other castings, 3 percent (2 percent in 1981). Shipments for sale represented 85 percent of sand castings, 59 percent of permanent mold castings and 46 percent of die castings.

DESCRIPTION:

This table shows shipments of aluminum castings separately for sand, permanent mold and die castings, both for sale and own use. Own use shipments are for captive consumption in the producers' end products.

Ingot requirements for the castings shipments shown in this table are part of the net ingot shipments shown on page 5.

Shipments of Castings
1972-1982

Millions of Pounds

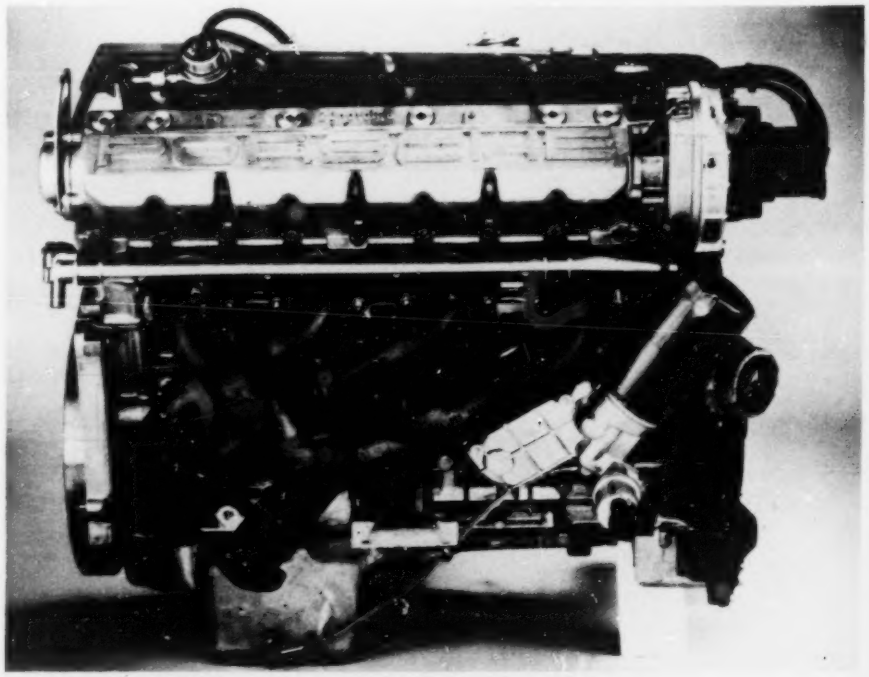
Year*	Total Castings(1)	Sand Castings		Permanent and Semi-permanent Mold Castings		Die Castings	
		for sale	own use	for sale	own use	for sale	own use
1972	1,855.7	157.5	72.1	233.4	186.4	465.4	726.7
1973	2,026.1	182.5	77.1	243.9	196.3	520.8	783.6
1974	1,759.5	198.6	69.3	218.5	158.6	458.4	630.0
1975	1,375.5	144.9	52.4	156.7	130.7	327.8	538.4
1976	1,845.1	168.4	51.3	199.4	178.0	424.9	785.5
1977	2,009.0	184.4	42.3	223.3	216.0	469.4	835.1
1978	2,087.9	208.3	44.9	233.3	226.5	540.9	791.3
1979	2,080.5	242.3	43.3	259.3	222.9	565.7	703.5
1980	1,537.6	197.2	43.9	211.8	173.9	403.8	482.8
1981	1,580.1r	204.2r	41.5r	203.7r	141.0r	440.9r	512.0r
1982	1,306.2	185.1	31.4	138.3	94.2	351.3	461.2

r—Revised

(1) Total includes small amounts of "other" castings not shown separately

SOURCE: U.S. Department of Commerce, Bureau of The Census, Industry Division

** Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.*



The 944 Porsche is powered by a four-cylinder aluminum engine. Cast aluminum parts include the engine block, cylinder head, pistons, oil cooler pump housing, valve cover and intake pipes.

Seasonal Adjustment Factors

DESCRIPTION:

Every basic industry, including the aluminum industry, has an element of seasonality in its shipments. It is helpful for analysts to eliminate these seasonal fluctuations from raw data. The seasonal factors for use against the 1983 aluminum shipments found below combine both seasonal influences and the number of working days in each month.

In recent years the seasonal pattern for total aluminum shipments has revealed a significant peaking in the months of March through June, while all other months have traced an irregular trough. Not all products follow the same pattern. Monthly shipments of aluminum ingot and mill products are collected and published by the U.S. Department of Commerce, Bureau of The Census, Industry Division, and the Industry and Trade Administration, Bureau of Domestic Business Development, Office of Basic Industries, in Current Industrial Report Series M33-2.

To aid users of the REVIEW in interpreting currently published monthly data, seasonal adjustment factors for the year 1983 and 1984 are shown here for total mill products and for each of twelve mill products categories. The monthly factors, when divided into the unadjusted published shipment data, serve to remove from the monthly data the influence of seasonal effects and variations in the number of working days. The May 1983 mill products total factor of 102.6 indicates that May 1983 shipments are expected to be 2.6 percent higher than would have been the case if there were no working day or seasonal effects. After these seasonal factors have been applied, the adjusted series reflects the basic underlying trend and cyclical influence except for random fluctuations.

Seasonal Adjustment Factors

Product	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1983												
Total Aluminum	93.1	98.2	112.4	100.3	100.9	108.5	90.1	110.2	100.6	97.3	92.0	97.9
Ingot	77.0	91.6	105.6	94.4	95.5	109.3	88.0	120.9	98.8	97.4	87.9	126.6
Mill Products, Total	96.6	96.0	112.3	102.4	102.6	107.0	91.6	104.3	101.3	97.1	95.4	91.2
Sheet & Plate, NHT	97.2	95.0	112.6	102.2	102.6	108.8	93.2	106.4	102.4	94.4	92.7	90.3
Sheet & Plate, HT	104.3	96.7	117.7	106.2	102.8	102.0	93.3	96.6	97.6	94.1	96.5	89.7
Foil	98.0	98.6	113.3	101.1	101.4	102.4	86.3	100.7	99.6	102.6	98.5	95.3
Extruded Products, Total	97.6	101.5	102.6	105.2	108.8	105.6	95.1	105.1	101.8	98.7	102.7	71.7
Drawn Tube	99.9	102.5	119.0	109.5	109.9	103.4	79.7	94.4	86.9	95.2	97.0	100.6
Welded Tube	94.7	96.1	117.0	121.1	116.6	127.8	116.1	89.6	72.8	77.5	80.9	85.5
Rolled & Con't Cast Rod & Bar	97.1	95.4	113.3	92.2	90.1	99.9	87.9	114.5	112.0	98.1	99.6	101.1
Bare Wire	102.2	95.5	105.5	104.7	112.4	104.6	93.4	96.8	94.0	99.8	97.7	90.2
ACSR & Bare Aluminum Cable	85.3	97.3	110.6	102.0	104.4	111.2	92.6	100.9	99.0	101.0	91.8	102.2
Insulated or Covered Wire	89.8	94.7	114.1	108.3	105.3	112.1	86.9	101.1	101.8	102.7	93.4	88.2
Forgings & Impacts	99.1	103.9	119.6	105.6	107.4	101.5	87.3	90.9	100.1	100.6	94.3	84.9
Powder & Paste	81.4	97.5	120.0	106.7	108.4	102.4	97.7	101.6	98.6	94.5	101.8	87.8
1984	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**June**	**July**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
Total Aluminum	95.1	99.6	110.3	98.2	105.1	106.3	92.0	110.2	94.4	103.4	92.0	93.9
Ingot	78.6	95.7	110.6	92.4	99.5	107.0	90.8	120.8	92.7	103.5	87.9	121.4
Mill Product, Total	98.6	100.4	110.3	100.2	106.9	104.8	93.5	104.3	95.0	103.2	95.4	87.5
Sheet & Plate NHT	99.2	99.4	110.4	100.0	106.9	106.6	95.2	106.4	96.1	100.3	92.7	86.7
Sheet & Plate HT	106.5	101.1	115.4	103.9	107.1	99.9	95.2	96.6	91.6	100.0	96.5	86.1
Foil	100.1	103.1	111.1	98.9	105.6	100.3	88.1	100.7	93.4	109.1	98.5	91.4
Extruded Products, Total	99.6	106.1	100.6	103.0	113.4	103.4	97.0	105.1	95.5	105.0	102.7	68.8
Drawn Tube	102.0	107.1	116.7	107.2	114.5	101.3	81.4	94.4	81.6	101.2	97.0	96.5
Welded Tube	96.6	100.5	114.7	118.6	121.5	125.1	118.5	89.6	68.3	82.4	80.9	82.0
Rolled & Con't Cast Rod & Bar	99.1	99.8	111.1	90.3	93.9	97.8	89.7	114.5	105.1	104.3	96.6	97.0
Bare Wire	104.3	99.9	103.4	102.5	117.1	102.4	95.4	96.8	88.2	106.1	97.7	86.6
ACSR & Bare Aluminum Cable	87.1	101.7	108.5	99.8	108.8	108.9	94.6	100.9	92.8	107.4	91.8	98.0
Insulated or Covered Wire	91.6	99.0	111.9	106.0	109.8	109.8	88.7	101.1	95.5	109.2	93.4	84.6
Forgings & Impacts	101.2	108.6	117.3	103.4	111.8	99.4	89.1	90.9	93.9	107.0	94.3	81.4
Powder & Paste	83.0	101.9	117.7	104.4	112.9	100.3	99.7	101.6	92.5	100.4	101.8	84.2

Shipments by Major Market

SHIPMENTS OFF 9.8 PERCENT

Total industry shipments of aluminum in 1982 of 12,154 million pounds fell off 9.8 percent from the volume of 13,478 million pounds in 1981. Total domestic shipments fell 10.3 percent and exports dropped 5.5 percent.

Containers and Packaging continued as the industry's largest market in 1982 with a volume of 3,568 million pounds, or 29.4 percent of total shipments. Increased shipments for metal cans at 2,858 million pounds led this market's 1.6 percent growth over 1981. Semirigid food containers, household and institutional foil, caps & closures, collapsible tubes and many flexible packaging uses are other important components in this market.

Building and Construction, the industry's second market at 2,280 million pounds, declined 9.8 percent due to continued declining construction activity. Included in this market are residential, industrial, commercial, farm and highway applications as well as mobile homes.

Shipments to the **Transportation** market also declined. Volume of 1,755 million pounds was 18.1 percent lower than in 1981. Lower shipments for passenger cars, aircraft and aerospace, marine and rail and recreational vehicles accounted for most of the decline.

Electrical market applications showed a 15.1 percent decline to a 1,132 million pound volume in 1982. Wire and cable products dropped 11.5 percent; equipment usage dropped 20.5 percent.

Shipments to the **Consumer Durable** goods market experienced an 20.7 percent decline to a volume of 775 million pounds. Uses such as appliances, air conditioning, furniture and sporting goods and cooking utensils all showed decreases.

Shipments to the nonelectrical **Machinery and Equipment** market of 653 million pounds were 22.4 percent below 1981 and accounted for 5.4 percent of the total. Uses include agricultural, construction and industrial machinery, irrigation pipe, ladders, fasteners and other general industrial equipment.

Exports of aluminum totalling 1,295 million pounds declined 5.5 percent below 1981 levels and accounted for 10.7 percent of total shipments.

The **average annual growth rate** for aluminum shipments in the 1972-1982 period was 0.1 percent. The highest year in this decade was 1979 with 14,867 million pounds. The low point was 9,929 million pounds which occurred in the recession year 1975.

DESCRIPTION:

The Statistical and Marketing Research Committee of The Aluminum Association, Inc. has developed an annual breakdown of total aluminum industry shipments by major market since 1960. End use data on U.S. aluminum shipments are not available from government sources on a regular basis. Aluminum consumption figures for some industries are published by the U.S. Department of Commerce in the Census of Manufactures. The most recent such Census covers the year 1977.

In the United States the aluminum industry has identified its major markets as building and construction, transportation, consumer durables, electrical, machinery and equipment, containers and packaging, exports and other end uses. Each of these major markets has a wide range of end uses within it.

Tables on pages 13-17 show considerable detail on the major markets for 1972-1982. Pages 18-20 also depict trends for 1972-1982 in selected markets where the Aluminum Association has marketing programs, or which are important aluminum markets.

For information on years prior to 1972, see the Aluminum Statistical Review—Historical Supplement.

Selected Market Shipment Highlights — 1982

Total Shipments—Down 9.8%

- Exports down 5.5%
- Domestic shipments down 10.3%

Containers & Packaging—*Up* 1.6%

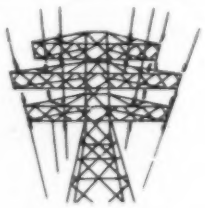
- No. 1 market—29.4% of total
- 3.6 billion pounds
- Aluminum now 89% all beverage cans

Building & Construction—Down 9.8%

- 2.3 billion pounds—18.8% of total
- Same as in previous recession year 1975

Transportation—Down 18.1%

- 1.8 billion pounds—14.4% of total
- Cars, truck, trailers—down 18.7%



Electrical—Down 15.1%

- Conductor wire & cable down 11.5%
- Electrical equipment down 20.5%
- Lowest volume in 10 years

Consumer Goods—Down 20.7%

- Volume almost down to previous recession year 1975

Shipments by Major Market

Aluminum Net Shipments* by Major Market

(Millions of Pounds)

Major Market	1982 % Distribution	1982 Amount	1981 % Distribution	1981 Amount	1981-1982 % Change	1972-1982 % Annual Growth Rate
Building & construction	18.8	2,280	18.8r	2,529r	−9.8	−3.7
Transportation	14.4	1,755	15.9r	2,143	−18.1	−2.4
Consumer durables	6.4	775	7.2r	977r	−20.7	−3.7
Electrical	9.3	1,132	9.9	1,333	−15.1	−3.0
Machinery & equipment	5.4	653	6.2r	841	−22.4	−1.4
Containers & packaging	29.4	3,568	26.1r	3,512r	+1.6	+6.9
Other (inc. statistical adjustment)**	5.7	696	5.7r	773r	−10.0	−4.3
Domestic, total	89.3	10,859	89.8	12,108r	−10.3	−0.5
Exports	10.7	1,295	10.2	1,370	−5.5	+8.9
INDUSTRY TOTAL	100.0	12,154	100.0	13,478r	−9.8	+0.1

N.A. Not applicable

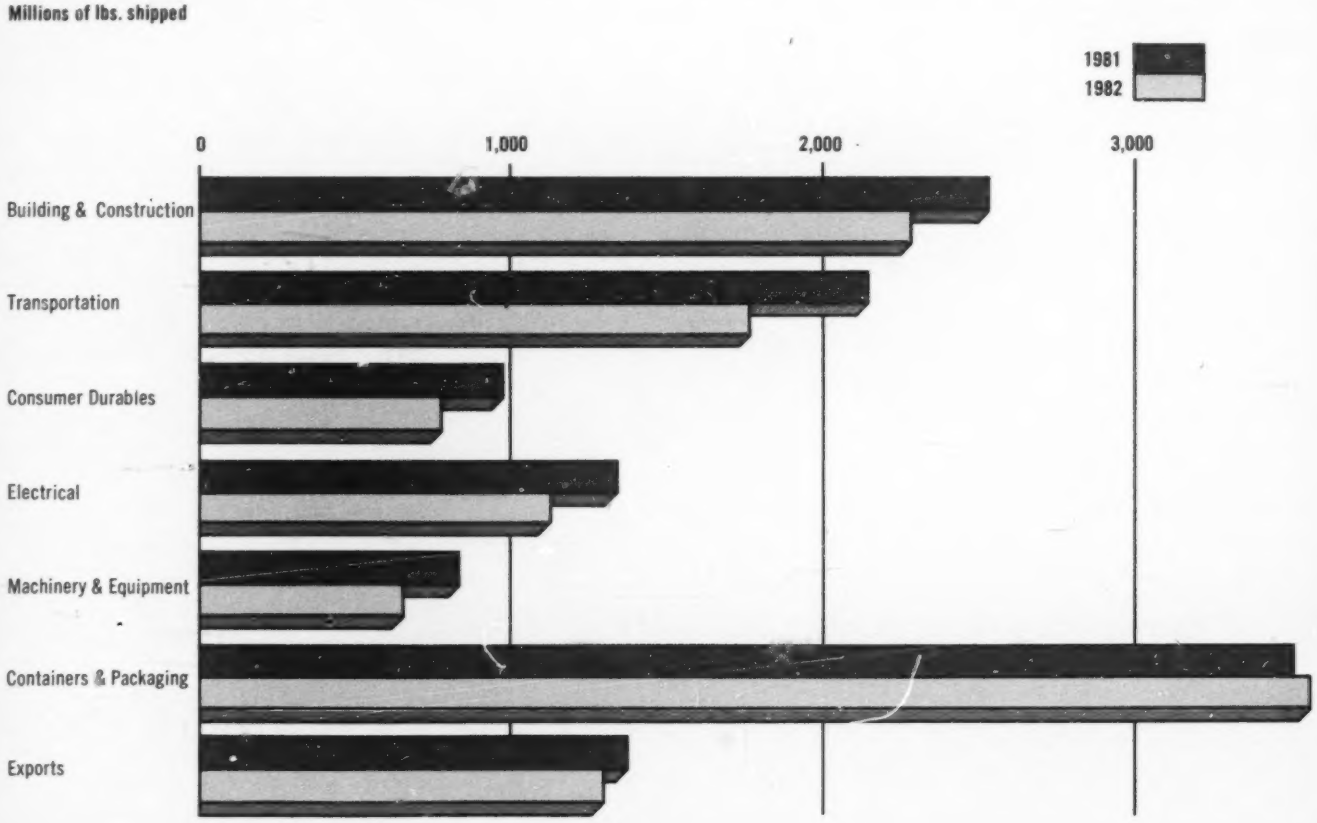
r — Revised

** "Net Shipments" exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.*

*** "Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net-shipments that the Aluminum Association feels are more correct.*

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Aluminum Net Shipments* by Major Market



Product Net Shipments* by Major Market
1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Total Aluminum											
Building & construction	2,280	2,529r	2,621	3,044	3,208	2,998	2,814	2,247	3,145	3,626	3,194
Transportation	1,755	2,143	2,232	3,078	3,088	2,878	2,428	1,708	2,441	2,813	2,224
Consumer durables	775	977r	877	1,023	1,151	1,052	1,021	754	1,160	1,339	1,127
Electrical	1,132	1,333	1,396	1,574	1,471	1,346	1,257	1,216	1,844	1,854	1,536
Machinery & equipment	653	841	829	950	988	910	888	649	1,045	949	750
Containers & packaging	3,568	3,512r	3,334	3,223	3,141	2,780	2,585	2,014	2,280	2,068	1,819
Other	538	637	598	644	636	585	580	524	748	870	830
**Statistical adjustment	+158	+136r	+119	+308	−5	−276	+31	+12	+140	+240	+15
Domestic, total	10,859	12,108r	12,006	13,844	13,678	12,273	11,604	9,124	12,803	13,759	11,495
Exports	1,295	1,370	2,193	1,023	747	713	821	805	927	925	552
ALUMINUM TOTAL	12,154	13,478r	14,199	14,867	14,425	12,986	12,425	9,929	13,730	14,684	12,047
Ingot(1)											
Building & construction	60	71	83	100	91	98	94	186	248	247	184
Transportation	795	959	948	1,307	1,242	1,225	1,101	828	1,053	1,302	1,023
Consumer durables	216	269	255	318	320	326	317	255	358	412	344
Electrical	134	166	167	210	182	182	171	220	272	285	215
Machinery & equipment	200	253	259	319	295	293	281	232	340	335	281
Containers & packaging	15	22	20	15	11	9	12	10	23	26	20
Other	230	306	293	335	320	300	299	269	361	396	346
**Statistical adjustment	+200	+157r	+102	+264	−42	−249	−47	—	+100	+200	—
Domestic, total	1,850	2,203r	2,127	2,868	2,419	2,184	2,228	2,000	2,755	3,203	2,413
Exports	817	706	1,445	419	253	204	312	378	423	465	221
INGOT TOTAL	2,667	2,909r	3,572	3,287	2,672	2,388	2,540	2,378	3,178	3,668	2,634
Mill Products											
Building & construction	2,220	2,458r	2,538	2,944	3,117	2,900	2,720	2,061	2,877	3,379	3,010
Transportation	960	1,184	1,284	1,771	1,846	1,653	1,327	880	1,388	1,511	1,201
Consumer durables	559	708r	622	705	831	726	704	499	802	927	783
Electrical	998	1,167	1,229	1,364	1,289	1,164	1,086	996	1,572	1,569	1,321
Machinery & equipment	453	588	570	631	693	617	607	417	705	614	469
Containers & packaging	3,553	3,490r	3,314	3,208	3,130	2,771	2,573	2,004	2,257	2,042	1,799
Other	308	331	305	309	316	285	281	255	387	474	484
**Statistical adjustment	−42	−21r	−17	+44	+37	−27	+78	+12	+40	+40	+15
Domestic, total	9,009	9,905r	9,879	10,976	11,259	10,089	9,376	7,124	10,048	10,556	9,082
Exports	478	664	748	604	494	508	509	427	504	460	331
MILL PRODUCTS TOTAL	9,487	10,569r	10,627	11,580	11,753	10,598	9,885	7,551	10,552	11,016	9,413

Note: *Total mill products are net shipments of aluminum mill products as reported by domestic producers to the U.S. Department of Commerce, plus imported mill products, less receipts of these imports by domestic producers.*

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market 1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Sheet											
Building & construction	1,022	1,190r	1,250	1,597	1,749	1,611	1,582	1,147	1,667	1,920	1,621
Transportation	386	499	499	824	932	865	669	352	591	732	609
Consumer durables	295	380r	333	353	424	375	387	287	472	547	478
Electrical	186	242	199	243	239	229	214	131	246	281	222
Machinery & equipment	229	282	258	267	313	265	249	155	278	264	198
Containers & packaging	2,977	2,869	2,693	2,559	2,488	2,169	1,971	1,501	1,670	1,443	1,247
Other	65	74	64	74	82	64	58	61	73	78	100
**Statistical adjustment	+15	−4	−11	+11	+8	+28	+50	+38	+22	+15	—
Domestic, Total	5,178	5,532r	5,285	5,928	6,235	5,606	5,180	3,672	5,019	5,280	4,475
Exports	296	368	375	374	265	323	322	230	338	310	232
SHEET TOTAL	5,471	5,900r	5,660	6,302	6,500	5,929	5,502	3,902	5,357	5,590	4,707
Plate											
Building & construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	151	179	216	220	190	160	146	161	197	150	112
Consumer durables	1	1	1	1	1	1	1	1	2	1	2
Electrical	4	18	5	10	10	7	6	10	15	14	13
Machinery & equipment	18	29	30	37	41	35	32	28	63	36	25
Containers & packaging	—	—	—	—	—	—	—	—	—	—	1
Other	14	12	13	12	10	11	10	9	17	12	13
Domestic, Total	189	240	266	281	253	215	196	210	295	214	167
Exports	27	43	51	30	27	21	21	46	29	18	11
PLATE TOTAL	216	283	317	311	280	236	217	256	324	232	178
Foil											
Building & construction	26	35	29	38	37	33	25	21	31	30	24
Transportation	29	32	31	41	45	38	25	16	16	20	18
Consumer durables	77	112	84	112	122	95	83	39	69	87	60
Electrical	19	25	23	30	27	25	23	14	26	26	21
Machinery & equipment	14	17	16	20	21	14	15	12	16	18	14
Containers & packaging	570	614r	614	640	633	597	597	501	583	596	548
Other	3	8	5	3	1	1	2	4	4	7	8
Domestic, Total	738	843r	802	884	886	803	770	607	745	784	693
Exports	13	21	38	21	12	13	14	10	17	8	5
FOIL TOTAL	751	864r	840	905	898	816	784	617	762	792	698
Extruded shapes											
Building & construction	1,106	1,163	1,176	1,215	1,235	1,163	1,019	812	1,074	1,302	1,250
Transportation	284	325	390	499	491	427	350	234	424	437	328
Consumer durables	80	88	96	117	133	106	94	70	109	113	85
Electrical	72	76	88	106	101	89	94	78	117	114	97
Machinery & equipment	72	80	88	108	115	88	81	72	84	79	67
Containers & packaging	—	—	—	1	—	—	—	—	—	—	1
Other	81	63	37	28	24	31	43	33	48	49	48
Domestic, Total	1,695	1,795	1,875	2,074	2,099	1,904	1,681	1,299	1,856	2,094	1,876
Exports	9	9	25	22	17	9	10	14	18	17	8
EXTRUDED SHAPES TOTAL	1,704	1,804	1,900	2,096	2,116	1,913	1,691	1,313	1,874	2,111	1,884

Product Net Shipments* by Major Market 1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Extruded pipe & tube											
Building & construction	19	18	23	31	29	31	33	27	42	46	47
Transportation	14	17	13	18	24	21	18	14	18	20	16
Consumer durables	20	21	19	21	28	22	18	13	19	21	20
Electrical	49	51	62	37	41	44	46	35	56	69	61
Machinery & equipment	13	21	26	29	35	45	53	31	65	55	38
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	3	3	3	2	2	2	3	3	6	8	8
**Statistical adjustment	−48	−32	−20	—	—	—	—	—	—	—	—
Domestic, Total	70	99	126	138	159	165	171	123	206	219	190
Exports	12	14	15	15	18	20	19	14	15	10	5
EXTRUDED PIPE & TUBE TOTAL	82	113	141	153	177	185	190	137	221	229	195
Drawn tube											
Building & construction	2	3	3	3	3	4	3	3	6	6	5
Transportation	5	8	11	17	18	17	15	10	12	20	20
Consumer durables	21	28	28	34	40	40	41	26	38	42	36
Electrical	9	9	10	10	13	13	13	10	14	13	11
Machinery & equipment	17	19	20	21	21	20	23	13	34	24	15
Containers & packaging	—	—	—	—	1	—	—	—	—	—	—
Other	6	7	8	10	10	9	2	3	5	4	7
Domestic, Total	60	74	80	95	106	103	97	65	109	109	94
Exports	1	1	1	1	1	1	1	1	1	1	1
DRAWN TUBE TOTAL	61	75	81	96	107	104	98	66	110	110	95
Welded tube											
Building & construction	1	2	2	2	3	2	2	2	3	3	2
Transportation	—	1	1	1	3	2	1	1	1	—	1
Consumer durables	45	54	36	41	58	62	53	40	55	74	67
Electrical	3	4	4	4	5	5	6	4	5	7	6
Machinery & equipment	13	46	41	44	47	69	81	52	73	51	39
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	1	3	2	2	2	2	1	1	1	1	1
**Statistical adjustment	−15	+4	+11	−11	−8	−28	−50	−38	−22	−15	—
Domestic, Total	48	114	97	83	110	114	94	62	116	121	116
Exports	—	—	—	—	—	—	—	—	1	1	1
WELDED TUBE TOTAL	48	114	97	83	110	114	94	62	117	122	117
Rod & bar *(2)*											
Building & construction	23	25	29	29	33	28	29	25	31	32	25
Transportation	29	31	35	40	44	35	34	28	37	41	28
Consumer durables	11	13	15	15	16	14	14	11	20	21	16
Electrical	66	92	97	93	85	67	73	55	85	86	52
Machinery & equipment	46	52	51	53	52	41	39	31	45	41	33
Containers & packaging	—	—	1	1	—	—	—	—	—	—	—
Other	24	20	26	26	31	27	25	29	42	46	47
**Statistical adjustment	+34	+51r	+109	+84	+68	—	+97	+30	+40	+40	+15
Domestic, Total	233	284r	363	341	329	212	311	209	300	307	216
Exports	52	103	137	62	60	28	55	52	47	60	39
ROD & BAR TOTAL	285	387r	500	403	389	240	366	261	347	367	255

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market 1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Bare Wire											
Building & construction	19	20	24	27	26	26	25	22	41	38	34
Transportation	4	4	5	8	8	8	6	5	7	8	8
Consumer durables	4	5	5	6	6	8	10	9	13	16	16
Electrical	8	9	11	11	10	11	10	11	21	20	17
Machinery & equipment	16	22	21	28	29	24	22	14	28	24	19
Containers & packaging	6	7	6	7	8	5	5	2	4	3	2
Other	3	3	4	6	4	4	3	3	4	4	4
**Statistical Adjustment	−18	−23	−60	−25	−22	−12	−16	−18	—	—	—
Domestic, Total	42	47	16	68	69	74	65	48	118	113	100
Exports	12	25	58	30	24	15	19	21	16	14	10
BARE WIRE TOTAL	54	72	74	98	93	89	84	69	134	127	110
ACSR & bare cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	299	311	367	387	335	295	294	399	534	487	444
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
**Statistical Adjustment	—	—	+8	—	—	—	—	—	—	—	—
Domestic, Total	299	311	375	387	335	295	294	399	534	487	444
Exports	46	68	25	31	55	57	28	27	9	4	10
ACSR & BARE CABLE TOTAL	345	379	400	418	390	352	322	426	543	491	454
Insulated or covered wire & cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	280	326	359	428	419	376	304	245	446	445	371
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
Domestic, Total	280	326	359	428	419	376	304	245	446	445	371
Exports	1	2	4	—	1	1	—	1	—	—	—
INSULATED OR COVERED WIRE & CABLE TOTAL	281	328	363	428	420	377	304	246	446	445	371
Forgings											
Building & construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	53	82	79	98	85	76	57	54	77	73	52
Consumer durables	1	2	2	2	2	2	2	2	2	3	2
Electrical	1	1	1	1	1	1	1	2	3	3	3
Machinery & equipment	8	10	10	13	13	11	7	6	14	18	18
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	12	10	11	8	9	9	12	14	12	12	15
**Statistical Adjustment	—	—	—	—	+5						
Domestic, Total	76	106	104	123	116	100	80	79	109	110	91
Exports	3	3	3	4	(NR)	6	3	4	4	5	4
FORGINGS TOTAL	79	109	107	127	116	106	83	83	113	115	95

Product Net Shipments* by Major Market
1972-1982

Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Impacts											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	5	6	4	5	6	4	6	5	8	10	9
Consumer durables	4	4	3	3	1	1	1	1	3	2	1
Electrical	2	3	3	4	3	2	2	2	4	4	3
Machinery & equipment	7	10	9	11	6	5	5	3	5	4	3
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	7	7	7	8	5	3	3	3	6	7	11
Domestic, Total	25	30	26	31	21	15	17	14	26	27	27
Exports	—	—	—	—	—	—	—	—	—	—	—
IMPACTS TOTAL	25	30	26	31	21	15	17	14	26	27	27
Powder & Paste											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	—	—	—	—	—	—	—	—	—	—	—
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	89	121	125	130	136	122	119	92	169	246	222
**Statistical Adjustment	−10	−17r	−20	−15	−14	−15	−3	—	—	—	—
Domestic, Total	79	104r	105	115	122	107	116	92	169	246	222
Exports	6	7	16	14	14	15	17	7	9	12	5
POWDER TOTAL	85	111r	121	129	136	122	133	99	178	258	227

"Net Shipments" exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.

**"Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net-shipments that the Aluminum Association feels are more correct.

r—Revised (NR) not reported by Census

(1) Includes primary and secondary ingot for castings, destructive uses and exports.
(2) Extruded rod & bar combined with rolled and continuous cast rod & bar from 1972 to present.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*
1972-1982

BUILDING & CONSTRUCTION — Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Windows, doors & screens, total	778	838	853	899	952	913	801	689	836	1,001	908
Ingot	20	27	38	42	36	40	38	98	114	117	80
Total mill products	758	811	815	857	916	873	763	591	722	884	828
Sheet	108	131	118	130	157	114	117	81	108	139	109
Plate	1	1	1	1	1	1	1	—	1	—	—
Extruded shapes	625	651	665	695	725	727	618	488	580	709	686
Rod & bar (1)	11	14	15	15	16	15	14	10	13	14	13
Bare wire	13	14	15	16	17	16	13	12	20	22	20
Awnings & canopies, total	105	114r	143	156r	177	145	137	93	152	221	173
Ingot	—	—	—	—	—	—	—	2	2	3	2
Total mill products	105	114r	143	156	177	145	137	91	150	218	171
Sheet	86	93r	121	131	150	122	117	73	127	186	142
Extruded shapes	16	18	19	21	23	19	16	14	18	25	23
Extruded pipe & tube	1	1	1	2	2	2	2	2	3	4	4
Drawn tube	1	1	1	1	1	1	1	1	1	1	1
Welded tube	1	1	1	1	1	1	1	1	1	2	1
Residential siding, total	262	324r	376	488	494	509	521	393	531	572	478
Sheet	261	323r	375	487	493	508	519	390	528	569	477
Extruded shapes	1	1	1	1	1	1	2	3	3	3	1
Mobile homes, total	163	173r	156	208	267	274	264	197	280	456	441
Ingot	3	3	3	4	4	4	4	7	12	17	13
Total mill products	160	170r	153	204	263	270	260	190	268	439	428
Sheet	106	115r	102	144	192	196	197	148	213	328	307
Extruded shapes	54	55	51	60	71	74	63	42	55	111	121
Bridge, street & highway, total	88	90	100	126	123	122	120	107	179	174	155
Ingot	9	10	11	14	13	15	15	19	22	22	20
Total mill products	79	80	89	112	110	107	105	88	157	152	135
Sheet	47	48	52	66	68	63	61	46	100	94	71
Foil	1	1	1	1	1	—	—	—	—	—	—
Extruded shapes	15	16	18	22	20	20	20	21	27	29	32
Extruded pipe & tube	15	14	17	22	20	23	23	19	28	28	32
Rod & bar (1)	1	1	1	1	1	1	1	2	2	1	—

TRANSPORTATION — Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Trucks & buses, total	252	301	286	488	428	427	359	162	366	402	278
Ingot	126	139	135	207	178	185	162	87	167	181	135
Total mill products	126	162	151	281	250	242	197	75	199	221	143
Sheet	68	85	77	158	137	137	114	36	103	123	76
Plate	3	4	4	8	7	7	7	4	11	14	8
Rod & bar (1)	2	2	2	5	5	3	2	1	2	2	1
Extruded shapes	36	45	44	69	64	63	52	24	57	59	40
Extruded pipe & tube	1	1	1	1	1	—	—	—	1	1	1
Drawn tube	1	1	1	1	1	1	1	—	—	—	—
Bare wire	—	—	—	1	1	1	—	—	1	1	1
Forgings	14	23	21	37	33	29	20	9	22	19	14
Impacts	1	1	1	1	1	1	1	1	2	2	2
Passenger cars, total(2)	854	1,072	1,034	1,482	1,543	1,479	1,242	859	1,024	1,319	1,042
Ingot	607	751	737	989	975	952	856	644	763	998	795
Total mill products	247	321	297	493	568	527	386	215	261	321	247
Sheet	156	199	180	333	392	378	264	124	154	204	164
Plate	1	1	1	1	2	—	1	—	—	—	—
Foil	26	28	24	36	41	35	22	14	12	17	15
Rod & bar (1)	9	9	10	11	11	11	12	9	12	16	10
Extruded shapes	37	59	61	73	77	58	51	42	54	43	24
Extruded pipe & tube	7	10	6	10	14	14	11	7	9	12	10
Drawn tube	1	4	7	12	13	13	10	6	7	15	15
Bare wire	1	1	1	1	1	1	1	1	2	2	2
Forgings	8	8	6	14	14	14	9	8	7	6	2
Impacts	1	2	1	2	3	3	5	4	4	6	5
Trailers & semi-trailers, total	180	209	242	386	422	364	278	146	402	455	366
Ingot	15	18	20	31	30	28	20	20	37	42	31
Total mill products	165	191	222	355	392	336	258	126	365	413	335
Sheet	62	78	88	143	165	141	104	45	150	176	152
Plate	4	7	9	14	15	11	10	6	14	18	12
Rod & bar (1)	1	1	1	2	2	2	2	2	4	5	3
Extruded shapes	96	103	122	194	208	179	140	71	192	209	164
Extruded pipe & tube	1	1	1	1	1	1	1	1	1	1	1
Bare wire	1	1	1	1	1	2	1	1	3	3	3
Forgings	—	—	—	—	—	—	—	—	1	1	—

r — revised

** — These "selected markets" represent either those in which The Aluminum Association has marketing programs, or which are important aluminum market categories. They only account for a portion of aluminum shipments to each major market.*

(1) Extruded rod and bar combined with rolled and continuous cast rod and bar.

(2) Shipments to "Passenger Cars" cover new domestic automobile production, spare parts, accessories and after-market parts. Shipments for light trucks and vans are included in Trucks and Buses.

NOTE: For information on years prior to 1972, see the Aluminum Statistical Review—Historical Supplement.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*

CONSUMER DURABLES — Millions of pounds

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Air conditioners, freezers, refrigerators, total	215	287r	248	302	354	299	283	183	303	375	312
Ingot	21	30	28	36	36	33	30	26	34	38	30
Total mill products	194	257r	220	266	318	266	253	157	269	337	282
Sheet	95	117r	106	116	138	127	134	94	164	208	189
Foil	75	109	81	108	117	91	81	38	67	84	55
Extruded shapes	12	13	13	19	31	22	17	12	16	18	16
Extruded pipe & tube	11	14	12	13	18	13	11	8	12	14	13
Drawn tube	1	4	8	10	14	13	10	5	8	10	6
Rod & bar (1)	—	—	—	—	—	—	—	—	1	1	1
Bare wire	—	—	—	—	—	—	—	—	1	2	2
Portable appliances, total	39	57	55	64	68	53	55	47	74	90	79
Ingot	21	29	29	35	35	32	32	27	41	50	44
Total mill products	18	28	26	29	33	21	23	20	33	40	35
Sheet	14	23	22	24	27	16	18	16	28	36	31
Extruded shapes	3	3	2	2	2	2	2	2	3	3	3
Drawn tube	1	1	1	2	3	3	3	2	2	1	1
Rod & bar (1)	—	1	1	1	1	—	—	—	—	—	—
Cooking utensils, total	134	169	161	151	169	137	152	135	169	190	164
Ingot	19	24	24	26	26	24	26	24	29	32	25
Total mill products	115	145	137	125	143	113	126	111	140	158	139
Sheet	109	140	132	121	139	109	122	108	137	155	136
Plate	—	—	—	—	—	—	—	—	—	—	1
Extruded shapes	4	4	4	3	3	3	3	2	2	3	2
Welded tube	—	—	—	—	—	—	—	—	1	—	—
Bare wire	1	1	1	1	1	1	1	1	—	—	—
CONTAINERS & PACKAGING											
Household & institutional foil, total	270	287	283	290	257	259	245	232	245	224	219
Metal cans total mill products	2,858	2,725	2,583	2,445	2,349	2,051	1,851	1,411	1,540	1,307	1,139
Sheet	2,858	2,725	2,583	2,445	2,349	2,051	1,851	1,411	1,540	1,307	1,139
Semi-rigid food containers Total mill products	134	153	160	159	176	168	166	150	156	173	165
Sheet	19	38	20	22	23	15	15	9	13	14	12
Foil	115	115	140	137	153	153	151	141	143	159	153

r — revised

** — These "selected markets" represent either those in which The Aluminum Association has marketing programs, or which are important aluminum market categories. They only account for a portion of aluminum shipments to each major market.*

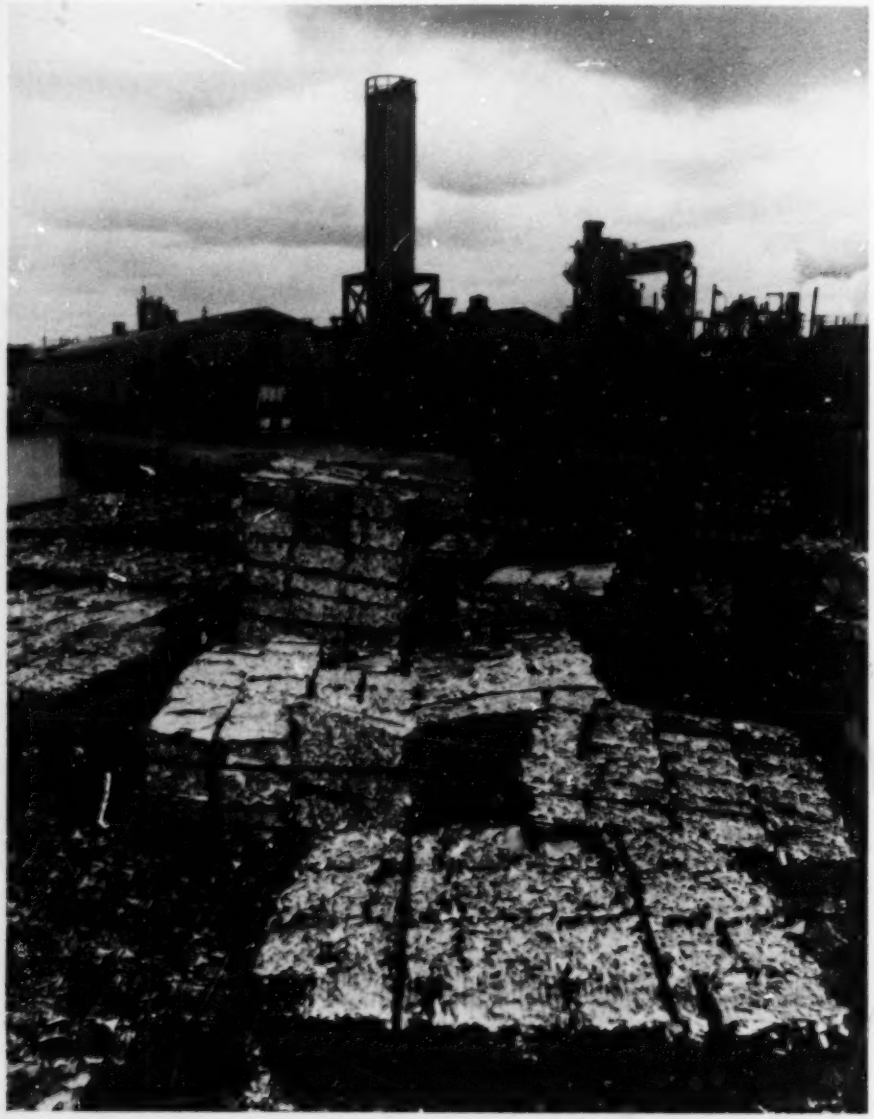
(1) Extruded rod and bar combined with rolled and continuous cast rod and bar.

(2) Shipments to "Passenger Cars" cover new domestic automobile production, spare parts, accessories and after-market parts. Shipments for light trucks and vans are included in Trucks and Buses.

NOTE: For information on years prior to 1972, see the Aluminum Statistical Review—Historical Supplement.

SOURCE: Estimated by the Statistical and Marketing Research Committee of the Aluminum Association, Inc.

U. S. Aluminum Supply



Shredded scrap awaits remelting. Scrap from recycling efforts is a major source of supply of aluminum.

The U.S. aluminum supply decreased 2,535 million pounds in 1982 to a total of 13,032 million pounds. This represents a 16.3 percent decrease compared to the 1981 supply level. Primary production at 7,217 million pounds was 27.1 percent lower than the 9,896 million pounds produced in 1981.

Primary imports of 1,359 million pounds were 4.4 percent below the 1981 level of 1,421 million pounds. Imports of mill products increased 50.0 percent to 456 million pounds during 1982 as compared to 304 million pounds in 1981.

Import data for both years reflect the reimports of metal exported for processing and returned for further processing in accordance with tariff arrangements under TSUSA 806-30 (Tariff Schedules of the United States Annotated).

Secondary recovery (domestic and imports) was 4,000 million pounds. The graph on page 22 illustrates the relative change in the portions of total aluminum supplies from each source for the years 1950 through 1982.

The table on page 23 details the total supply of aluminum and its principal sources for the years 1942 through 1982 before any adjustments for stockpile deliveries or withdrawals. The significance of the stockpile and its effect on total supply are described on page 24.

The growth of U.S. primary aluminum production over the years is outlined on the semilog graph and detailed in the table on page 25. The average annual growth rate since 1946 has been 6.3 percent.

Installed capacity by company is presented for the years 1972 through 1982 on page 26. The 1982 year-end primary aluminum capacity in the U.S. was 5,532,200 short tons, up 0.5% from 1981.

Aluminum recovery from scrap is an important contributor to the total aluminum supply. Data showing the increase in this source of supply for the years 1946 through 1982 are presented on pages 30 and 31.

Total Supply

1982 SUPPLY DOWN 16.3%

Total supply decreased 16.3% to 13,032 million pounds in 1982

Changes vs. 1981:

Primary production	−27.1%
Imports, Primary	− 4.4%
Imports, Mill Products	+50.0%
Secondary Recovery	+ 1.4%

Since 1946, the total supply has expanded at an average rate of 6.2 percent a year. In 1982 primary production represented 55.4 percent of total supply; imports accounted for 14 percent; and secondary recovery represented 30.7 percent.

In the ten years 1972-1982 domestic primary production increased at the rate of 6.3 percent a year. Secondary recovery grew at a 5.5 percent annual rate.

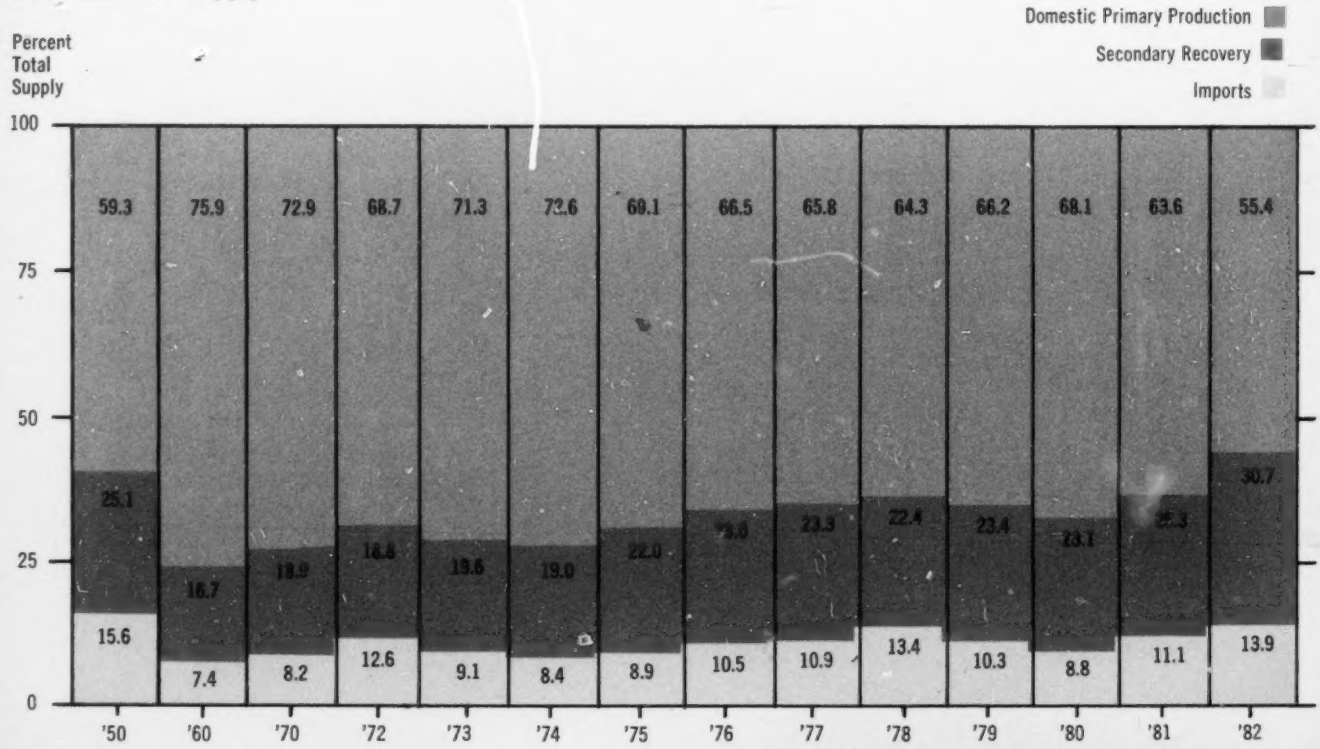
DESCRIPTION

United States supply of aluminum consists of domestic primary production, imports of primary and mill products, and metal recovered from scrap. No adjustment is made in this presentation for shipments to or withdrawals from the government stockpile. This is shown on page 24.

Detailed data on United States supply of aluminum from 1942 to 1982 are shown in the table on page 23.

For a longer historical picture of domestic primary production, see page 25. For the relationship of domestic primary production to world production, see pages 44-45. For a breakdown of imports, see pages 38-39. For further information on secondary recovery, see pages 30 and 31.

U.S. Aluminum Supply



BEST AVAILABLE COPY

Total Supply

1942-1982

Millions of pounds

Year	Total supply, all sources	Domestic primary production	Imports			Secondary Recovery		
			Total	Primary[1]	Mill Products[3]	Total	Domestic[2]	From Imported Scrap[1][2]
1942	1,660	1,042	225	213	12	393	393	(a)
1943	2,739	1,840	271	271	(a)	628	628	(a)
1944	2,409	1,553	202	201	1	654	651	3
1945	2,268	990	672	665	7	606	597	9
1946	1,486	819	85	83	2	582	556	26
1947	1,893	1,144	31	31	(a)	718	690	28
1948	2,128	1,247	178	166	12	703	574	129
1949	1,812	1,207	171	155	16	434	362	72
1950	2,423	1,437	377	354	23	609	487	122
1951	2,581	1,674	286	245	41	621	585	36
1952	2,786	1,875	289	256	33	622	609	13
1953	3,957	2,504	668	602	66	785	737	48
1954	4,034	2,921	472	443	29	641	626	15
1955	4,439	3,131	441	395	46	867	828	39
1956	4,746	3,358	511	462	49	877	856	21
1957	4,703	3,295	494	451	43	914	890	24
1958	4,429	3,131	572	511	61	726	708	18
1959	5,416	3,908	590	480	110	918	898	20
1960	5,306	4,029	392	309	83	885	876	9
1961	5,295	3,807	507	398	109	981	970	11
1962	6,163	4,236	751	622	129	1,176	1,164	12
1963	6,874	4,625	924	831	93	1,325	1,308	17
1964	7,435	5,105	901	788	113	1,429	1,414	15
1965	8,414	5,509	1,198	1,055	143	1,707	1,658	49
1966	9,075	5,937	1,302	1,047	255	1,836	1,775	61
1967	9,378	6,539	1,028	899	129	1,811	1,756	55
1968	10,080	6,510	1,508	1,371	137	2,062	1,994	68
1969	11,004	7,586	1,066	937	129	2,352	2,300	52
1970	10,912	7,952	894	700	194	2,066	2,000	66
1971	11,345	7,850	1,282	1,109	173	2,213	2,100	113
1972	12,005	8,245	1,508	1,319	189	2,252	2,252	—[2]
1973	12,697	9,058	1,154	1,016	138	2,485	2,485	—[2]
1974	13,499	9,807	1,128	1,018	110	2,564	2,564	—[2]
1975	11,229	7,758	999	868	131	2,472	2,472	—[2]
1976	12,785	8,503	1,340	1,151	189	2,942	2,942	—[2]
1977	13,792	9,077	1,505	1,340	165	3,210	3,210	—[2]
1978	14,954	9,608	2,000	1,516	484	3,346	3,346	—[2]
1979	15,168	10,046	1,568	1,142	426	3,554	3,554	—[2]
1980	15,064	10,259	1,329	1,161	168	3,476	3,476	—[2]
1981	15,567r	9,896	1,725	1,421	304	3,946r	3,946r	—[2]
1982	13,032	7,217	1,814	1,359	456	4,000p	4,000p	—[2]

r — Revised *Detail may not add to totals due to rounding*

p — preliminary

(a) Less than 0.5 million pounds

(1) Some imports of "starter" metal, classified by the Bureau of The Census in 1954-1957 as scrap, have here been classified as primary metal, as estimated by the Department of Commerce.

(2) Domestic secondary data are recoverable metal content for estimated total scrap consumption, as estimated by the Bureau of Mines. Before 1972 total supply included both domestic secondary recovery and an estimated 90 percent recovery from reported scrap imports. Beginning in 1972 the Bureau of Mines required reporting of imported scrap recovery data and these data are included in the domestic secondary recovery figures beginning with that year.

(3) Starting in 1970, includes reimports of metal exported for processing and returned for further processing (TSUSA 906.30)

SOURCE: U.S. Department of Commerce, Bureau of the Census, Department of Interior, and Bureau of Mines.

U. S. Suppliers' Inventories

INVENTORIES DECLINE

The Bureau of the Census began reporting U.S. Suppliers' aluminum inventory in 1968. The figures include all forms of scrap, ingot, metal in process and finished products. During 1982 inventories decreased by 407 million pounds to a year-end inventory of 6,199 million pounds.

U.S. Suppliers' Inventories 1972-1982

Millions of pounds at end of year

Year*	Total	Type of Supplier		
		Integrated	Non Integrated	Secondary Smelter
1972	4,861	4,070	621	171
1973	4,366	3,608	607	151
1974	5,156	4,202	753	201
1975	5,999	5,199	598	202
1976	5,701	4,781	687	234
1977	5,706	4,778	687	241
1978	5,494	4,460	776	258
1979	5,125	4,124	768	233
1980	5,076	4,018	797	261
1981	6,607	5,542	798	266
1982	6,199	5,224	759	216

Detail may not add due to rounding.

** Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCE: U.S. Department of Commerce, Bureau of the Census Current Industrial Report M33-2.

Total Supply Adjusted for Stockpile

The United States Government's aluminum stockpile, following World War II, was formed to provide the nation with a supply of aluminum for mobilization purposes. Since 1963, as a result of an agreement between major domestic aluminum producers, other interested aluminum enterprises and the U.S. Government, a program of orderly disposal of the stockpile ensued. By the end of 1976, the stockpile was essentially depleted. The data in the table represent the best figures available from different sources. Total supply, unadjusted for stockpile changes is on page 23.

Total Supply Adjusted for Stockpile 1972-1982

Millions of pounds

Year*	Total supply adjusted for stockpile	Total supply, all sources	Shipments from stockpile	Shipments to stockpile
1972	12,017	12,005	12	—
1973	14,158	12,697	1,461	—
1974	14,520	13,499	1,021	—
1975	11,234	11,229	5	—
1976	12,803	12,785	18	—
1977	13,792	13,792	—	—
1978	14,954	14,954	—	—
1979	15,168	15,168	—	—
1980	15,064	15,064	—	—
1981	15,567r	15,567r	—	—
1982	13,032	13,032	—	—

(a) Less than 0.5 million pounds

** Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCES: General Services Administration; U.S. Department of Commerce; Industry Sources

Production of Primary Aluminum

PRODUCTION DOWN 27.1%

Primary aluminum production totaled 7,217 million pounds in 1982 vs. the production of 9,896 million pounds in 1981. In the decade 1972-1982, the growth rate showed an average annual rate of 1.3 percent.

DESCRIPTION:

In the United States, primary production of aluminum was begun in 1888 by the Pittsburgh Reduction Company. Data on aluminum production started in 1893, covering the industry from its very early period.

The semi-log graph on this page illustrates the rapid growth in the production of primary aluminum from 1893. Data for 1972-1982 are presented here for your review. Data prior to 1972 may be obtained from the Aluminum Statistical Review—Historical Supplement.

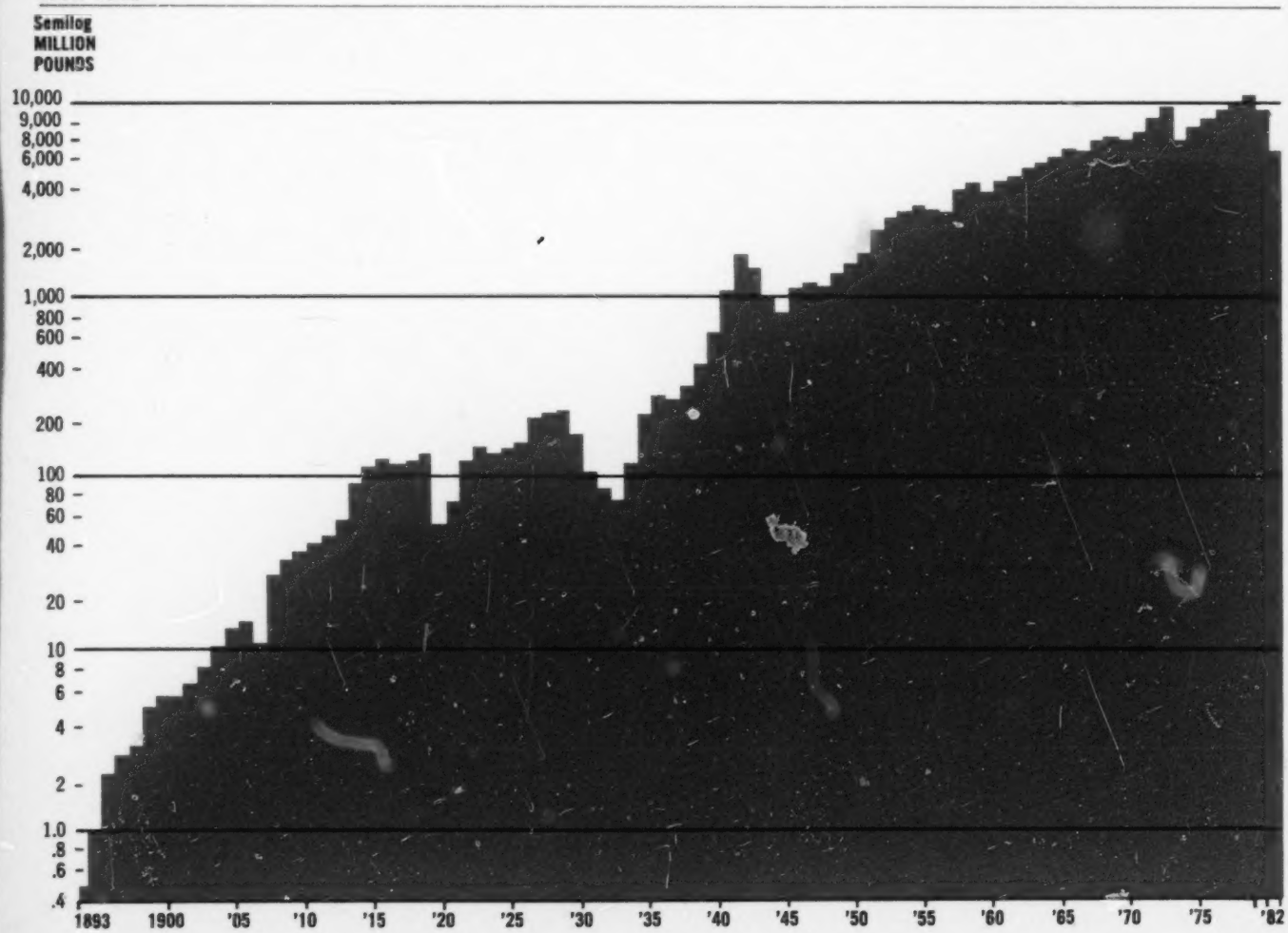
Production of Primary Aluminum in U.S.A. 1972-1982

Year*	Millions of pounds
1972	8,244.8
1973	9,058.2
1974	9,806.9
1975	7,758.3
1976	8,502.8
1977	9,077.4
1978	9,607.6
1979	10,046.2
1981	9,895.9
1982	7,217.3

** Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.*

SOURCES: U.S. Department of the Interior, Bureau of Mines and the Aluminum Association, Inc.

Production of Primary Aluminum 1893-1982



SOURCE: The Aluminum Association, Inc.

Primary Aluminum Capacity

CAPACITY UP 0.5%

Total annual primary aluminum capacity as of December 31, 1982 was 5,532,200 tons. Increases of 177 thousand short tons by Alumax, Consolidated, Howmet, Martin Marietta and Noranda were offset by a decrease of 149 thousand short tons by Alcoa.

The percentage distribution of U.S. primary capacity by company at year-end 1982 was: Alcoa 28.4; Reynolds 17.6; Kaiser 13.1; Alumax 7.7; Consolidated 6.5; ARCO 6.5; Martin Marietta Aluminum 5.0; Howmet 4.1; Noranda 4.1; Revere 3.7; National Aluminum 1.6; and Southwire 1.6.

DESCRIPTION:

There were twelve domestic primary producing companies as of December 31, 1982. They are Aluminum Company of America, Alumax, Inc. (including 50% interest in Intalco and Eastalco), ARCO Metals Company, Consolidated Aluminum Corporation (including 66% interest in Ormet), Howmet Aluminum Corporation (50% interest in Eastalco and Intalco), Kaiser Aluminum & Chemical Corporation, Martin Marietta Aluminum Incorporated, National Aluminum Company (50% interest in National-Southwire), Noranda Aluminum Incorporated, Revere Copper and Brass Incorporated (including 34% interest in Ormet), Reynolds Metals Company and Southwire Company (50% interest in National-Southwire).

Primary Aluminum Capacity (1)
1972-1982

Thousands of Short Tons

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Alcoa	1,576.0	1,725.0	1,725.0	1,700.0	1,700.0	1,675.0	1,675.0	1,575.0	1,575.0	1,570.0	1,570.0
Reynolds	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0	975.0
Kaiser	724.0	724.0	724.0	724.0	724.0	724.0	724.0	724.0	724.0	710.0	710.0
Alumax	425.0	415.7	415.7	218.7	218.0	218.7	218.7	219.0	130.5	130.5	130.5
Consolidated (2)	360.2	352.0	352.0	352.0	352.0	352.0	352.0	352.0	342.0	177.0	175.0
ARCO Aluminum (3)	360.0	360.0	360.0	360.0	300.0	300.0	300.0	300.0	300.0	300.0	180.0
Martin Marietta	275.0	210.0	210.0	210.0	210.0	210.0	210.0	210.0	205.0	201.0	201.0
Howmet	228.2	218.7	218.7	218.7	218.7	218.7	218.7	217.5	217.5	217.5	217.5
Noranda	225.0	140.0	140.0	140.0	140.0	140.0	140.0	70.0	70.0	70.0	70.0
Revere	203.8	203.2	203.2	203.2	203.2	200.0	199.5	199.0	197.0	197.0	197.0
National Aluminum	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Southwire	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Olin (2)	—	—	—	—	—	—	—	—	—	165.0	165.0
Total	5,532.2	5,503.6	5,503.6	5,281.6	5,224.4	5,193.4	5,192.9	5,021.5	4,916.0	4,893.0	4,771.0

(1) Capacities shown are as reported for December 31. They include nominal ownership of plants owned by more than one company.
(2) Consolidated acquired the aluminum business of Olin Corporation in 1974.
(3) Formally the Anaconda Company (Aluminum Division).

NOTE: Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.

SOURCE: The Aluminum Association, Inc.

Number of Plants in the U. S.

Number of Plants in the U.S.

SELECTED YEARS

PRODUCT	1982	1977	1967
Primary Ingot	32	32	24
Secondary Ingot	76	89	89
Sheet and Plate	68	49	57
Foil	27	27	26
Rod & Bar, Rolled and Continuous Cast	22	31	21
Wire, Bare, Conductor & Nonconductor	69	125	67
ACSR and Aluminum Cable, Bare	16	59	36
Wire & Cable, Insulated or Covered	43	90	61
Extruded Products	226	222	177
Drawn Tube	19	22	24
Welded Tube	18	32	21
Powder	17	18	19
Forgings	44	74	52
Impacts	16	29	na

na — Not available

SOURCE: 1967 & 1977 U.S. Department of Comerce. 1982: The Aluminum Association.

The latest data presented here are based on a survey conducted by the Aluminum Association. Previous years are basen on unofficial directories prepared by the U.S. Department of Commerce, Bureau of Industrial Economics.

The figures shown for each product for selected years represent number of plants—not companies, which in many instances operate more than one plant. No totals are shown since some plants produce more than one product. Data include captive plants (plants producing only for company's own use).

Five outline maps of the United States indicating the geographic distribution of aluminum plants by various product groups are presented on pages 27-29.

Now Available

For a detailed listing, contact the Aluminum Association for a copy of the U.S. Aluminum Industry Plant Directory (October, 1982)

U. S. Plants — cont.

★ Extrusions

■ Forgings and/or Impacts
● Powder and Paste
★ Drawn and/or Welded Tube

Aluminum Scrap Consumption and Recovery

SCRAP CONSUMPTION DOWN 5%

Total domestic industry scrap consumption on a gross weight basis, decreased 5.0% in 1982 to 2,126,000 tons from the 1981 volume of 2,239,000 tons.

Secondary recovery totaled 2,000,000 tons with new scrap accounting for 53 percent and old scrap for 47 percent.

Old scrap recovery at 950,000 tons was up 13.6 percent from 1981. Reclamation from aluminum cans reached 562,000 tons, up 10.5 percent over 1981 accounting for 55.5% of can shipments.

Aluminum Can Reclamation Data 1972-1982

Year	Pounds of Aluminum Collected (millions)	No. of Aluminum Cans Collected (billions) [3]	Percent of Aluminum Cans Collected [4]
1972	53[1]	1.2	15.4
1973	68[1]	1.5	15.2
1974	103[1]	2.3	17.5
1975	180[2]	4.1	26.9
1976	212[2]	4.9	24.9
1977	280[2]	6.6	26.4
1978	340[2]	8.0	27.4
1979	360[2]	8.5	25.7
1980	609[2]	14.8	37.3
1981	1,017[2]	24.9r	53.2
1982	1,124[2]	28.3	55.5

(1) Represents total industry; includes additional 1, 5, and 18 million pounds in the years 1972, 1973 and 1974 respectively which accounts for all-aluminum cans collected by non-members of the Aluminum Association.

(2) SOURCE: Net receipts—U.S. Department of the Interior, Bureau of Mines.

(3) Calculation based on an Association can weight survey.

(4) Based on Can Manufacturers Institute aluminum beverage can shipments data lagged one quarter.

r — revised from previous issue

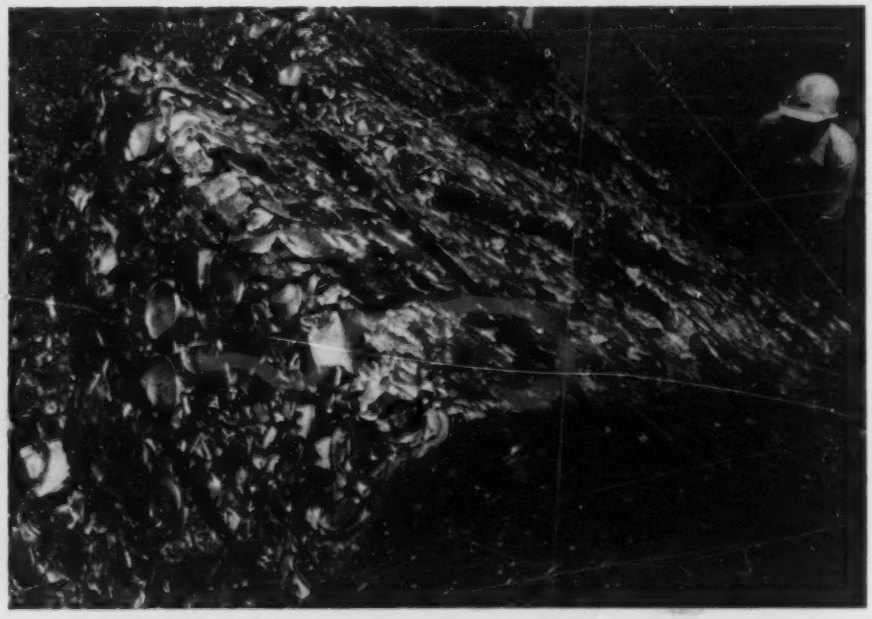
DESCRIPTION:

Recovery of aluminum from scrap, an important source of supply, is shown on pages 30 and 31. Two sets of scrap data are tabulated. The scrap consumption figures are on a gross weight basis as reported by plants consuming scrap. The aluminum recovery figures are on a recovered metal basis, that is the content of aluminum base alloy recovered from gross weight consumed. The figures in this table are consistent with domestic secondary recovery on page 25.

The aluminum recovery data are shown by source, that is by new and old scrap. New scrap, generated by plants making end products, and old scrap recovered from metal that has been used by consumers, are returned to plants making ingot and mill products and thus add to the total metal supply.

Through 1954, data on scrap consumption and recovery are based on complete reporting. Beginning in 1955, reported figures are expanded to industry totals by the Bureau of Mines to allow for a number of firms who do not report. In 1961, sweated pig consumption data were improved and included in old scrap.

Recovery of new scrap and old scrap over the past ten years has been about 22 percent of total supply (30.7 percent in 1982). However, this figure does not include "run-around" scrap consumed by the generating companies.



A worker examines baled scrap on its way to the shredder at the beginning of the recycling process. After shredding, it will be treated to remove impurities before being remelted.

Aluminum Scrap Consumption and Recovery 1946-1982

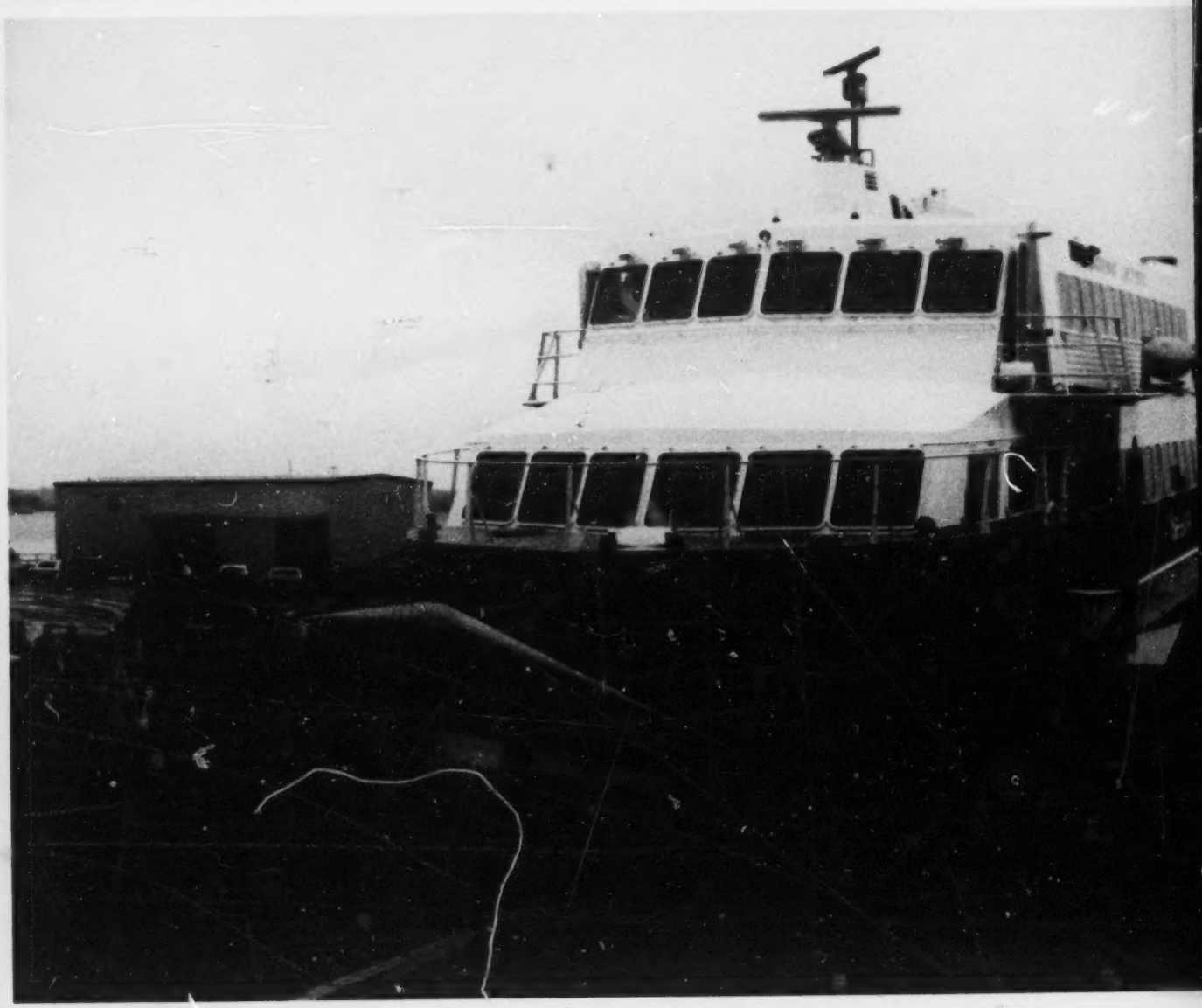
Short Tons

Year	SCRAP CONSUMPTION: Total Industry[1]	SCRAP CONSUMPTION (Gross Weight Basis) As Reported[6]: Total	Secondary Smelters	Primary Producers[2][3]	Others[4]	RECOVERY[5] (Recovered Metal Basis): Total Industry[1]	From New Scrap	From Old Scrap
1946	344,000	344,000	238,000	100,000	6,000	278,073	187,538	90,535
1947	411,070	411,070	312,087	90,009	8,974	344,837	180,990	163,847
1948	324,495	324,495	217,666	100,454	6,375	286,777	191,129	95,648
1949	199,039	199,039	128,472	65,602	4,965	180,762	136,166	44,596
1950	273,192	273,192	192,047	68,316	12,829	243,666	167,308	76,358
1951	332,296	332,296	232,339	80,463	19,494	292,608	216,017	76,591
1952	347,730	347,730	255,083	77,939	14,708	304,522	233,258	71,264
1953	413,333	413,333	276,279	116,011	21,043	368,566	289,626	78,940
1954	350,515	350,515	239,069	91,446	20,000	313,047	246,609	66,438
1955	490,000	427,045	313,879	86,739	26,427	414,000	314,500	99,500
1956	517,000	439,343	331,811	88,754	18,778	428,000	331,000	97,000
1957	532,000	463,000	345,000	94,000	24,000	445,000	347,500	97,500
1958	430,000	375,564	275,762	77,282	22,520	354,000	274,500	79,500
1959	539,000	475,964	384,506	62,917	28,541	449,000	345,000	104,000
1960	523,000	441,479	353,889	54,366	33,224	438,000	343,000	95,000
1961	579,000	498,116	331,705	44,572	121,839	485,000	329,500	155,500
1962	700,000	594,873	442,168	36,520	116,185	582,000	415,500	166,500
1963	780,000	647,489	493,168	44,885	109,436	654,000	495,000	159,000
1964	850,000	712,251	538,992	58,928	114,331	707,000	545,000	162,000
1965	970,000	816,620	579,844	94,985	141,791	829,000	624,000	205,000
1966	1,080,000	896,334	638,757	125,487	132,090	887,500	700,250	187,250
1967	1,060,000	882,795	617,145	122,987	142,663	878,000	703,500	174,500
1968	1,218,000	1,015,070	699,289	152,176	163,605	997,000	816,000	181,000
1969	1,331,000	1,109,097	742,118	196,857	170,122	1,150,000	950,000	200,000
1970	1,167,000	972,533	650,327	153,247	168,959	1,000,000	803,000	197,000
1971	1,210,000	1,004,778	639,909	170,755	194,114	1,050,000	834,000	216,000
1972	1,342,000	1,152,433	706,484	205,231	240,718	1,126,000	876,000	250,000
1973	1,481,000	1,262,439	736,819	212,545	313,075	1,242,000	977,000	265,000
1974	1,448,000	1,206,061	630,223	238,958	336,880	1,282,000	978,000	304,000
1975	1,454,000	1,232,155	611,540	342,810	277,805	1,236,000	899,000	337,000
1976	1,741,000	1,465,462	758,992	365,190	341,280	1,471,000	1,062,000	409,000
1977	1,854,000	1,568,215	841,258	425,733	301,224	1,605,000	1,074,000	531,000
1978	1,911,000	1,616,514	882,697	437,360	296,457	1,673,000	1,098,000	575,000
1979	2,020,000	1,705,031	922,159	442,262	340,610	1,777,000	1,163,000	614,000
1980	1,982,000	1,693,633	884,255	541,771	267,607	1,738,000	1,058,000	680,000
1981	2,239,000r	2,239,000r	1,142,000r	731,000r	366,000r	1,973,000r	1,137,000r	836,000r
1982	2,126,000	2,126,000	1,001,000	742,000	383,000	2,000,000	1,050,000	950,000

r — revised
p — preliminary
(1) As reported, 1946-54; estimates expanded from reported figures, 1955-82.
(2) For 1951-53 includes small amounts reported consumed by non-integrated fabricators
(3) Represents 100 per cent scrap consumption coverage by primary producers
(4) Most consumption of sweated pig apparently not reported by "others" prior to 1961
(5) Recovery from sweated pig included in new scrap 1946-60, old scrap 1961-82.
(6) Figures 1981 to present represent estimated full coverage.

SOURCE: U.S. Department of the Interior, Bureau of Mines and U.S. Department of Commerce, Bureau of Industrial Economics.

U. S. Aluminum Foreign Trade Statistics



Lightweight, non-rusting aluminum help speed this Belgian hydrofoil between Dover, England and Ostend, Belgium up to six times a day. The hydrofoil can carry 316 passengers on its 62-nautical mile trip.

For the year 1982 imports of aluminum ingot and mill products accounted for 13.9 percent of total aluminum supply in the United States. Exports comprised 10.7 percent of total industry shipments. These facts ilustrate the major role of foreign trade in the U.S. aluminum industry.

During 1982 imports of aluminum ingot decreased 4.4% to 1,359 million pounds as compared with 1981 of 1,421 million pounds. Imports of semifabricated products increased 49.9% to 456 million pounds.

Exports of aluminum ingot increased in 1982 to 802 million pounds, a 16.6% rise over the 1981 level of 688 million pounds. Exports of semifabricated products declined to 492 million pounds, 27.8 percent below 1981.

Exports of aluminum scrap showed a 11.1 % decrease to a 429 million pound level, the lowest since 1978.

In 1982, the U.S. was again a net importer of aluminum by an amount of 243 million pounds.

The product composition of United States imports and exports for the years 1950-1982 is graphically presented on pages 34 and 35. The data for total imports and exports as well as the detail of semi-fabricated aluminum product imports and exports for 1982 and the preceding 10 years are tabulated on pages 36 and 37. The total imports include dross and skimmings and the gross weight of scrap. In the table on United States Supply (page 23) dross and skimmings are excluded, and the recovered weight of imported scrap is used. It is counted as part of domestic secondary recovery for the years 1972-1982 and shown as a separate supply component for years prior to 1972.

The detail of 1982 aluminum imports by product and country of origin is presented on pages 38 and 39. Similarly, the exports on a product basis by country of destination are detailed on pages 40 and 41.

For information on years prior to 1972, see the Aluminum Statistical Review-Historical Supplement.

U. S. Imports

IMPORTS UP 3.8%

Aluminum imports totaled 1,967 million pounds during 1982, up 3.8 percent from 1981. Ingot, which accounted for 69.1 percent of all aluminum imported during 1981 fell 4.4 percent to 1,359 million pounds. Semifabricated aluminum products increased 49.9 percent to 456 million pounds. Sheet imports at 384 million pounds were up 70.7 percent with Japan being the largest source at 45.3 % of the total. Scrap imports decreased 10.2 percent to 152 million pounds.

In 1982, the U.S. imported aluminum from 42 different countries. The largest single source was Canada at 1,102 million pounds or 56.1 percent of the total aluminum imported. Imports from Ghana were 377 million pounds (19.2%) and from Japan, 178 million pounds (9.1%).

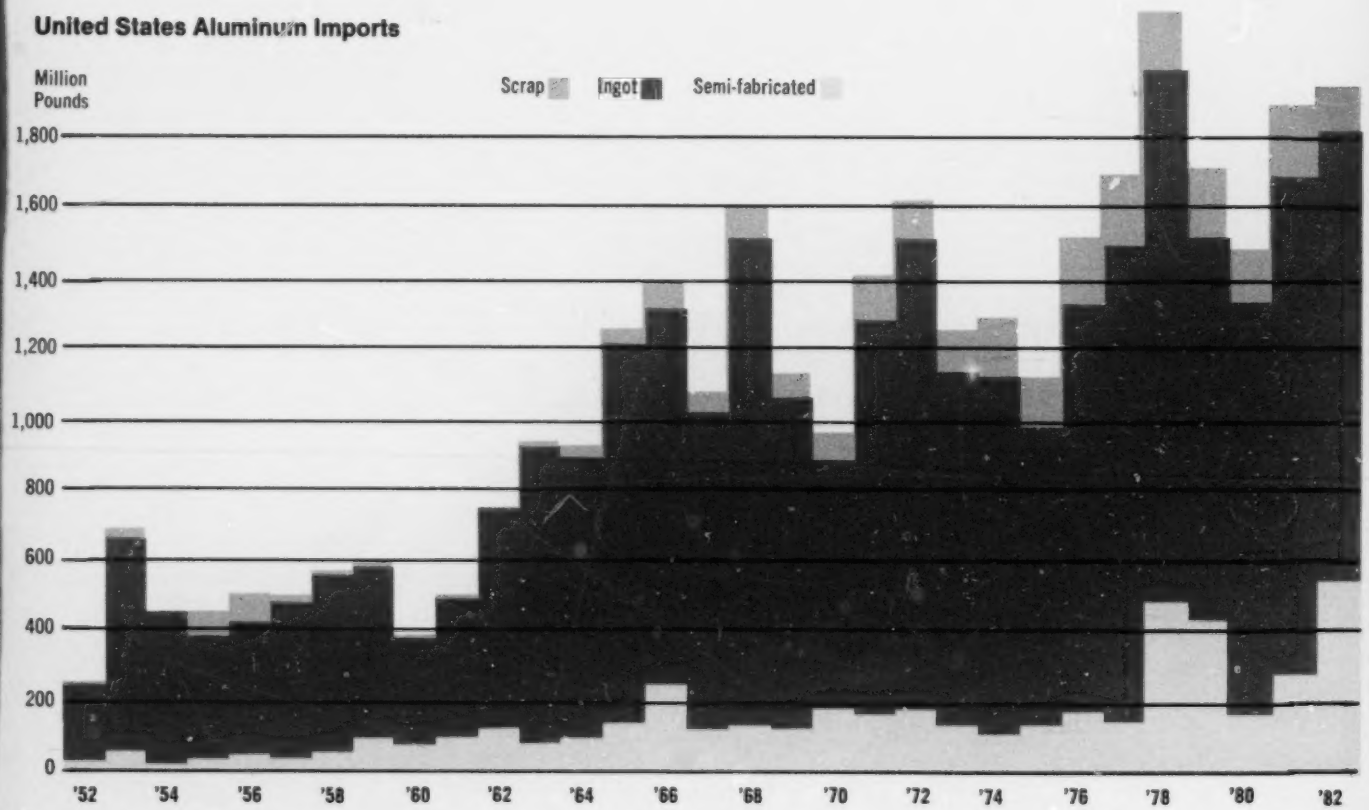
DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum imports in the years 1952-82. In addition to showing the imports of ingot, scrap, and dross and skimmings, the upper half of the table on pages 36 and 37 shows in detail the categories of imports of semi-fabricated products for the years 1972-1982. Imports of aluminum by country for the year 1982 are shown on pages 38 and 39.

Backed foil imports and exports have been removed from the foreign trade statistics beginning in 1979. Data for prior years have been revised to agree with the new definition.

The import data for 1981-82 include reimports of metal exported for processing and returned for further processing under the TSUSA 806.30 tariff rule. While these data are comparable with the years 1970-1980, they are not strictly comparable to years prior to 1970 because of the nonavailability of these statistics for those years. Data on reimports are shown on pages 38 and 39.

United States Aluminum Imports



Note: Includes reimports since 1970 *SOURCE: The Aluminum Association, Inc.*

U. S. Exports

U.S. EXPORTS DOWN 7.0%

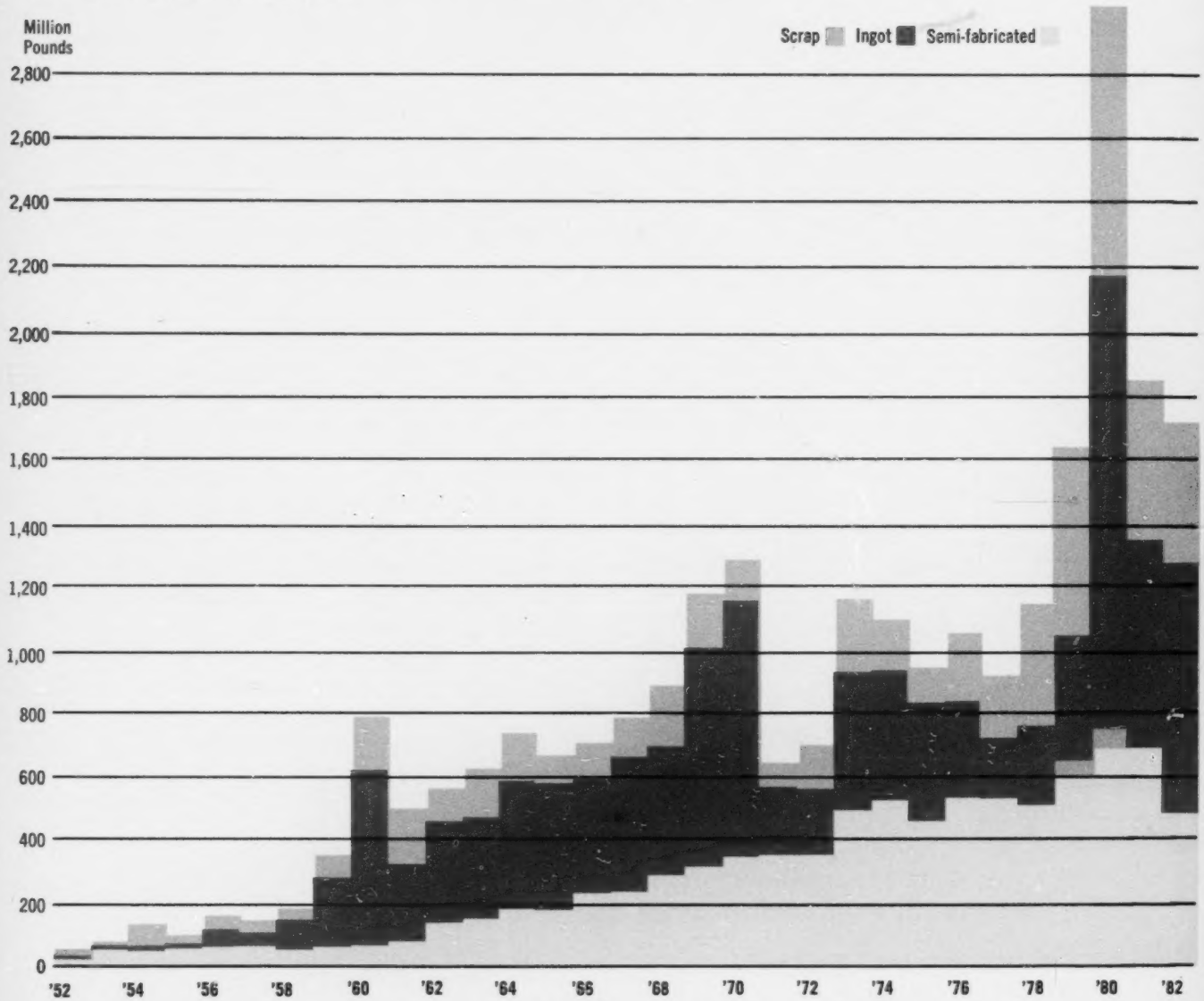
Total aluminum exports during 1982 were 1,723 million pounds, down 7.0 percent from 1981. Ingot exports rose 16.6 percent to 802 million pounds from a 1981 level of 688 million pounds. Semifabricated exports declined 27.8% from 682 million pounds in 1981 to 492 million pounds in 1982. Exports of scrap dropped from 482 million pounds in 1981 to 429 million pounds in 1982, about 11.1%.

Of the 114 countries receiving aluminum from the U.S., Japan received 57 percent or 991 million pounds (689 ingot, 293 scrap and 9 semifabricated). Exports to Canada were 279 million pounds of which 193 million pounds were semifabricated products and exports to Mexico were 134 million pounds of which 76 million pounds were semifabricated products.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum exports in the years 1952-1982. In addition to showing the exports of ingot and scrap, the lower portion of the table on pages 36 and 37 shows the detail of exports of semifabricated products for the years 1972-1982. Exports of aluminum by country for 1982 are shown on pages 40 and 41.

United States Aluminum Exports



United States Imports and Exports

United States Imports and Exports 1972-1982

Thousands of pounds

PRODUCT	1982	1981	1980	1979	1978
Total Imports	1,966,647	1,894,847	1,453,529	1,714,794	2,194,902
TOTAL INGOT & SEMIFABRICATED	1,814,325	1,725,220	1,329,404	1,567,857	2,000,058
INGOT	1,358,751	1,421,311	1,161,328	1,141,517	1,515,576
SEMIFABRICATED, TOTAL	455,574	303,909	168,076	426,339	484,482
Sheet & plate, Total	414,819	247,139	126,117	357,285	433,684
Circles & disks	16,404	11,673	7,757	21,529	20,473
Other	398,415	235,466	118,360	355,756	413,211
Foil, Total	19,328	13,430	9,099	17,925	21,451
Over .00035"	8,749	4,791	3,532	6,020	7,489
Not over .00035"	8,708	6,608	4,116	10,036	12,626
Capacitor	1,870	2,031	1,452	1,870	1,336
Rod & bar	10,057	34,238	16,343	37,959	22,133
Wire	3,202	3,220	2,256	6,902	3,840
Cable	101	8	144	146	77
Angles, shapes, etc.	1,272	1,320	1,206	1,664	1,793
Pipe & tube	1,279	1,167	682	1,098	868
Powder	5,515	3,388	12,228	3,361	637
SCRAP	148,675	163,988	119,603	136,632	184,305
DROSS & SKIMMINGS	3,647	5,639	4,522	10,305	10,539
Total Exports	1,723,285	1,852,324	3,082,645	1,637,086	1,136,424
TOTAL INGOT & SEMIFABRICATED	1,294,687	1,370,001	2,193,283	1,022,924	747,409
INGOT	802,348	688,321	1,429,813	401,300	253,234
SEMIFABRICATED, TOTAL	492,339	681,680	763,470	621,625	494,174
Sheet & plate	323,074	411,385	425,792	404,509	291,764
Foil	12,933	21,338	37,911	20,566	11,902
Rod & bar	51,980	102,463	136,736	61,510	59,672
Wire, bare	11,791	24,653	57,737	30,129	23,906
Other conductor	46,953	70,324	29,031	30,600	56,121
Angles, shapes, etc.	9,298	8,507	25,528	22,402	17,110
Pipe & tube, Total	13,157	15,216	16,500	16,178	19,115
Electric conduit	3,218	3,137	1,569	1,901	3,493
Other	9,939	12,079	14,931	14,277	15,622
Powder	6,082	6,769	16,047	14,356	14,584
Castings	14,359	17,860	14,992	17,840	na
Forgings	2,711	3,165	3,195	3,526	na
SCRAP	428,598	482,323	889,363	614,162	389,015
Net Imports*	243,362	42,523	−1,629,116	77,708	1,058,478

Detail may not add to totals due to rounding.

** Imports less exports*

NOTE: Prior to 1972, consult the Aluminum Statistical Review—Historical Supplement.

1977	1976	1975	1974	1973	1972
1,688,604	1,524,971	1,120,267	1,287,966	1,256,267	1,619,403
1,505,431	1,339,742	998,468	1,127,430	1,154,272	1,507,745
1,340,658	1,150,741	868,281	1,017,722	1,016,068	1,318,784
164,773	189,001	130,187	109,708	138,204	188,961
128,675	150,543	107,087	69,690	99,460	138,467
15,363	16,949	10,492	11,634	15,503	19,815
113,312	133,594	96,595	58,056	83,957	118,652
9,763	10,993	4,465	13,637	18,366	24,531
3,679	4,593	2,301	8,931	9,351	13,235
5,141	5,253	1,551	3,358	8,115	10,642
943	1,147	615	1,348	900	654
18,146	20,907	12,718	18,813	13,240	16,774
3,526	4,072	2,590	3,355	2,548	3,566
438	507	917	1,519	676	833
2,082	490	932	647	569	577
731	919	842	1,193	2,909	3,763
1,415	570	637	854	436	451
179,789	171,427	109,613	149,486	93,616	104,601
3,384	13,802	12,186	11,050	8,379	7,057
915,508	1,038,439	938,770	1,087,467	1,155,316	684,190
712,182	820,522	804,968	927,150	925,157	552,111
195,542	304,732	371,770	415,668	459,156	216,637
516,640	515,790	433,268	511,482	466,001	335,473
344,309	343,014	276,321	366,910	327,871	242,695
13,062	14,252	10,375	16,865	8,109	4,906
27,433	54,913	51,577	46,617	59,855	38,937
15,240	18,364	21,481	16,008	14,179	10,352
58,137	27,630	27,350	8,541	4,209	10,107
8,494	9,761	14,120	18,533	17,019	8,344
21,370	19,755	15,107	17,410	12,297	6,686
7,230	4,577	3,266	2,245	2,346	1,398
14,140	15,178	11,841	15,165	9,951	5,288
14,804	16,879	6,920	8,733	11,908	4,514
8,146	7,759	5,774	7,513	5,656	4,442
5,643	3,463	4,243	4,352	4,899	4,492
203,326	217,917	133,802	160,317	230,159	132,079
773,096	486,532	181,497	200,499	100,951	935,213

SOURCE: U.S. Department of Commerce, Bureau of The Census.

United States Imports by Product and Country

United States Imports by Product and Country, 1982

Thousands of Pounds

	Total	Ingot	Scrap, Dross, and Skimmings	Semi-fabricated Products	Circles and Discs	Sheet
TOTAL ALL COUNTRIES	1,966,647	1,358,751	152,322	455,574	16,404	384,453
NORTH AMERICA	1,119,584	924,875	137,575	57,134	26	45,440
Canada	1,102,340	924,600	121,193	56,547	—	45,427
Mexico	14,789	269	13,988	532	26	2
Other	2,455	6	2,394	55	—	11
SOUTH AMERICA	30,221	20,040	—	10,181	210	8,182
Argentina	16,049	7,614	—	8,435	162	7,654
Venezuela	13,434	12,309	—	1,125	—	24
Brazil	734	116	—	618	48	501
Columbia	3	—	—	3	—	3
EUROPE, TOTAL	219,850	33,601	12,643	173,606	12,223	124,029
EUROPEAN ECONOMIC COMMUNITY	165,324	22,412	12,478	130,434	9,981	92,375
Federal Republic of Germany	51,154	10,201	3,806	37,147	81	27,030
Belgium, Luxembourg	39,613	1,476	1,329	36,808	3,533	31,996
France	29,397	4,230	89	25,078	3,690	13,602
United Kingdom	24,980	4,926	7,139	12,915	405	7,105
Italy	12,753	1,143	1	11,609	2,228	6,131
Netherlands	7,029	436	114	6,479	2	6,296
Greece	342	—	—	342	123	180
Denmark	41	—	—	41	—	24
Republic of Ireland	15	—	—	15	—	11
OTHER EUROPE	54,526	11,189	165	43,172	2,242	31,654
Norway	16,868	2,599	—	14,269	1,438	12,760
Yugoslavia	13,555	—	—	13,555	142	8,142
Switzerland	6,489	2,421	—	4,068	—	802
Spain	4,024	1,101	165	2,758	646	1,978
U.S.S.R.	3,741	3,741	—	—	—	—
Austria	3,069	—	—	3,069	—	2,875
Sweden	2,758	1,327	—	1,431	16	1,145
Hungary	2,345	—	—	2,345	—	2,276
Romania	1,674	—	—	1,674	—	1,674
Finland	2	—	—	2	—	2
Portugal	1	—	—	1	—	—
Poland	*	—	—	*	—	—
ASIA	186,094	118	2,077	183,899	3,944	176,089
Japan	178,408	118	8	178,282	515	174,319
Hong Kong	4,056	—	665	3,391	3,389	—
Israel	3,198	—	1,404	1,794	—	1,648
Taiwan, Republic of China	219	—	—	219	—	117
India	110	—	—	110	—	—
Republic of Korea	66	—	—	66	40	5
Bahrain	37	—	—	37	—	—
Other	*	*	—	*	—	—
OCEANIA	30,782	4	27	30,751	—	30,713
Australia	30,755	4	—	30,751	—	30,713
Other	27	—	27	—	—	—
AFRICA	380,115	380,113	—	2	—	—
Ghana	376,814	376,814	—	—	—	—
Republic of South Africa	3,301	3,299	—	2	—	—

Details may not add to totals because of rounding.
**Less than 500 pounds*
SOURCE: U.S. Department of Commerce, Bureau of The Census.
NOTE: Reimports are metal exported for processing and returned for further processing (TSUSA 806.30)

Plate	Foil, Total	Capacitor Foil	Foil, not Over 0.00035"	Foil, over 0.00035"	Rod and Bar	Wire	Cable	Angles, Shapes, and Sections	Pipe and Tube	Powder and Flakes
13,962	19,328	1,870	8,708	8,749	10,057	3,202	101	1,272	1,279	5,516
5,651	4,145	1	3,887	258	601	217	62	602	276	113
5,651	4,109	1	3,880	229	123	217	62	587	257	113
—	*	—	—	*	478	—	*	15	10	—
—	36	—	7	29	—	—	—	—	9	—
126	41	—	36	5	1,530	49	—	—	1	40
126	14	—	14	—	429	49	—	—	—	—
—	—	—	—	—	1,101	—	—	—	—	—
—	27	—	22	5	—	—	—	—	1	40
—	—	—	—	—	—	—	—	—	—	—
7,943	14,784	1,822	4,785	8,175	6,985	1,469	38	445	363	5,324
6,761	12,093	1,822	2,524	7,747	2,867	439	38	312	299	5,268
91	8,094	298	2,159	5,638	110	42	—	107	138	1,454
153	76	5	64	7	995	41	—	—	11	4
4,004	2,434	532	207	1,695	575	103	37	48	58	607
1,531	137	—	6	130	312	65	1	152	47	3,159
982	1,163	966	—	197	865	180	—	3	17	40
—	150	21	88	41	10	8	—	2	7	4
—	39	—	—	39	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	17	—
—	—	—	—	—	—	—	—	—	4	—
1,182	2,689	*	2,261	428	4,118	1,030	*	133	64	56
53	1	—	1	—	—	—	—	3	1	14
84	—	—	—	—	4,114	1,025	—	—	46	—
911	2,337	—	2,163	174	4	4	—	9	*	—
11	80	—	—	80	—	—	—	—	1	41
—	—	—	—	—	—	—	—	—	—	—
—	130	—	86	104	—	—	—	*	4	—
123	12	—	11	1	—	1	—	120	12	1
—	69	—	—	69	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	*	*	—	—	—	—	*	—	—	—
—	—	—	—	—	—	—	—	1	—	—
—	—	—	—	—	—	*	—	—	—	—
216	350	47	*	303	938	1,466	*	224	635	39
212	213	47	*	166	938	1,424	*	222	437	2
*	—	*	—	—	—	*	—	1	*	—
—	—	—	—	—	—	7	—	—	139	—
3	28	—	—	28	—	34	*	1	36	—
—	109	—	*	109	—	—	—	—	*	—
—	*	—	—	*	—	—	—	—	22	—
—	—	—	—	—	—	—	—	—	—	37
—	—	—	—	—	—	*	—	—	*	—
26	7	—	—	7	—	—	—	—	5	—
26	7	—	—	7	—	—	—	—	5	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2	—	—	—	—	—

United States Exports by Product and Country

United States Exports by Product and Country, 1982

Thousands of pounds

	Total	Ingot	Waste and Scrap	Semi-fabricated Products	Plate, except Circles and Discs	Sheets, except Circles and Discs
TOTAL ALL COUNTRIES	1,723,285	802,348	428,598	492,338	26,674	290,235
NORTH AMERICA	422,535	66,467	79,529	276,539	9,800	196,035
Canada	278,791	36,720	48,806	193,265	4,547	154,289
Mexico	134,303	26,372	30,336	77,595	4,625	41,063
Trinidad	1,920	724	—	1,196	8	10
Jamaica	1,429	662	150	617	174	107
Dominican Rep.	1,020	97	60	863	3	143
Other	5,072	1,892	177	3,003	443	423
SOUTH AMERICA	34,413	5,032	8,793	20,588	1,399	14,725
Venezuela	16,092	1,185	23	14,884	192	12,913
Brazil	10,742	1,157	8,026	1,559	128	744
Peru	2,387	1,416	88	883	633	58
Chile	1,738	825	383	530	253	140
Columbia	1,598	317	230	1,051	84	341
Argentina	943	78	6	859	2	379
Other	913	54	37	822	107	150
EUROPE, TOTAL	136,002	12,906	36,634	86,462	12,153	62,517
EUROPEAN ECONOMIC COMMUNITY	114,672	10,088	29,648	74,936	11,485	52,877
United Kingdom	45,833	1,247	1,192	43,394	1,595	38,402
Federal Republic of Germany	16,340	341	9,760	6,239	1,729	2,796
Italy	13,420	218	6,120	7,082	1,904	2,413
Belgium & Luxembourg	12,559	35	7,654	4,870	3,587	395
Netherlands	12,099	2,231	4,004	5,864	1,023	4,265
France	10,184	5,989	877	3,318	1,573	690
Republic of Ireland	2,101	1	—	2,100	—	2,022
Greece	1,530	4	41	1,485	—	1,468
Denmark	606	22	—	584	74	426
OTHER EUROPE	21,330	2,818	6,986	11,526	668	9,640
Spain	9,001	52	6,986	1,963	298	1,206
Sweden	8,192	417	—	7,775	199	7,404
Switzerland	3,163	2,324	—	1,839	139	501
Norway	345	13	—	332	13	163
Finland	35	3	—	32	—	10
Other	594	9	—	585	19	356
ASIA	1,078,682	716,701	301,694	60,287	2,965	11,360
Japan	990,622	689,215	292,714	8,693	1,509	3,996
Saudi Arabia	12,038	96	8	11,934	587	645
Taiwan, Republic of China	11,947	4,942	3,448	3,557	61	1,097
Pakistan	11,847	3,525	39	8,283	—	13
Korean Republic	11,337	4,449	4,609	2,279	72	505
Thailand	11,206	10,341	126	739	1	80
Israel	5,337	61	47	5,229	343	813
Indonesia	4,750	417	—	4,333	155	372
Hong Kong	4,563	606	178	3,779	43	1,882
Singapore	3,571	2,227	237	1,107	40	206
India	3,298	—	198	3,100	5	93
Philippines	2,917	743	90	2,084	—	233
Kuwait	1,525	1	*	1,524	44	1,020
Iraq	1,380	—	—	1,380	—	—
Other	2,344	78	—	2,266	105	405
OCEANIA	7,197	394	466	6,337	300	479
Australia	4,576	328	466	3,782	102	345
Other	2,621	66	—	2,555	198	134
AFRICA	44,453	845	1,483	42,125	57	5,121
Lybia	34,959	—	—	34,959	—	—
Republic of South Africa	3,240	5	1,392	1,843	40	816
Nigeria	2,586	117	—	2,469	—	2,457
Guinea	1,787	—	—	1,787	—	1,786
Other	1,881	723	91	1,067	17	62

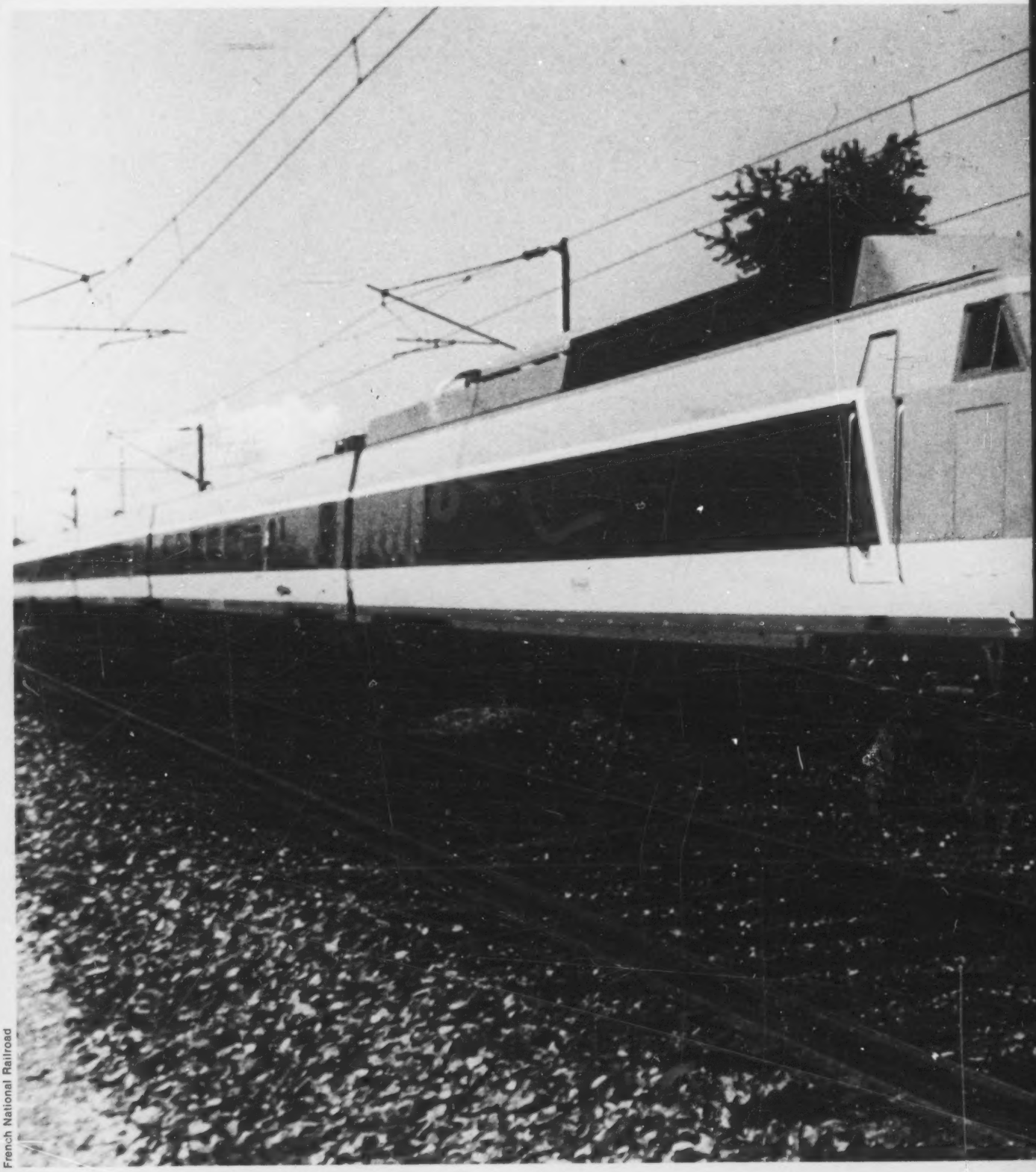
*Less than 500 pounds

Details may not add to totals because of rounding.

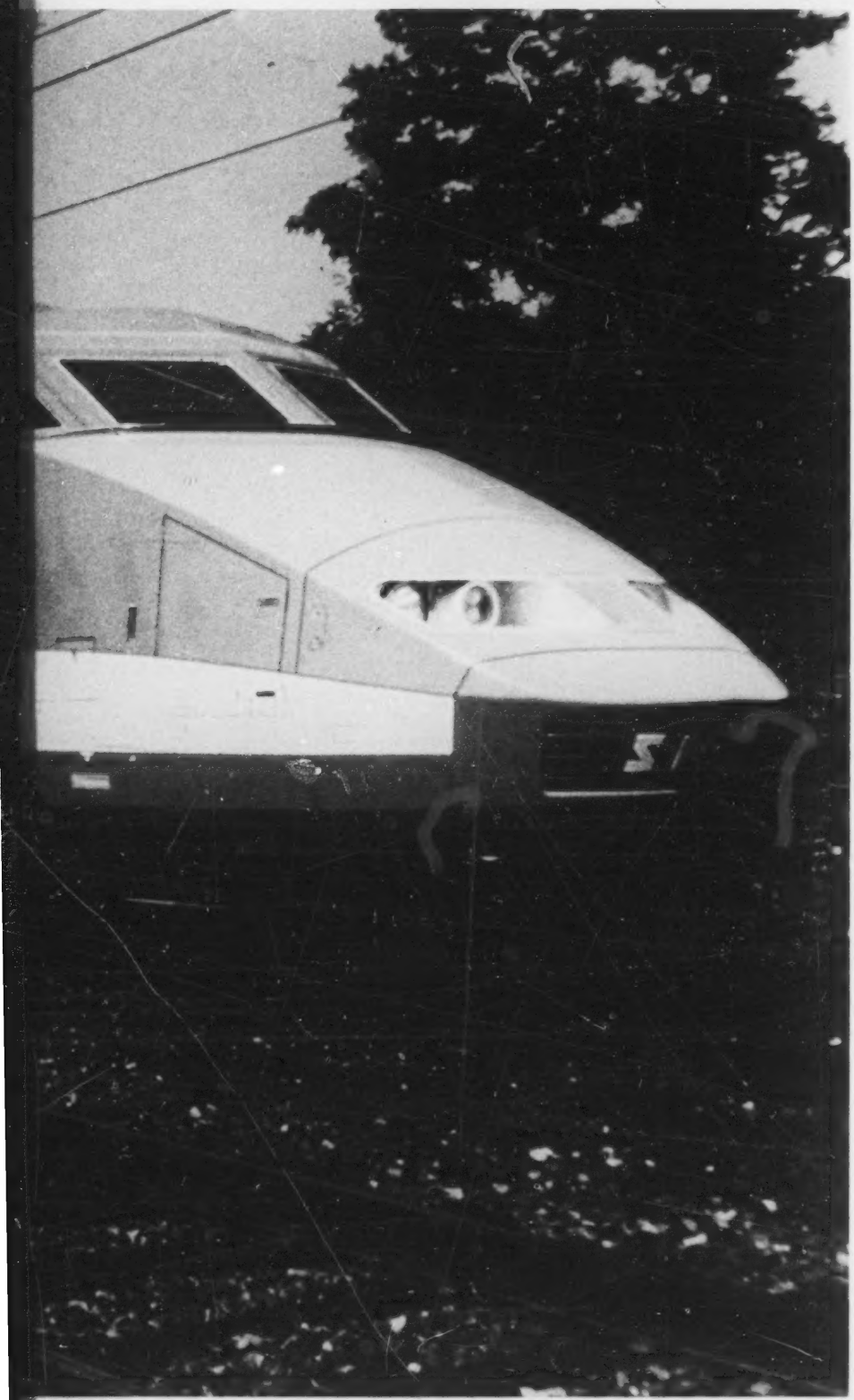
Circles and Discs, Sheet and Plate	Foil Not Backed	Rod and Bar	Bare Wire	Cable	Electrical Conduit	Other Pipe and Tube	Angles, Shapes, and Sections	Powder and Flakes	Castings	Forgings
6,165	12,933	51,979	11,791	46,953	3,218	9,939	9,298	6,082	14,359	2,711
4,849	5,666	26,776	6,319	1,996	824	4,828	3,819	1,318	12,685	1,621
4,714	2,873	4,613	1,824	1,579	668	2,123	2,220	1,075	11,126	1,614
87	1,491	21,988	3,981	51	100	2,020	621	196	1,372	*
4	255	86	74	9	—	22	562	1	165	—
1	120	10	25	4	37	80	57	1	—	1
12	157	35	31	—	—	387	89	2	—	3
31	770	44	384	353	19	196	271	43	23	2
253	1,159	846	477	326	7	900	86	193	169	43
150	766	372	101	299	4	38	4	27	16	1
43	102	90	2	—	*	353	*	43	15	37
—	4	4	106	16	—	23	—	35	1	3
—	5	16	15	—	*	13	12	72	2	2
36	171	261	5	1	—	12	7	8	126	—
1	1	41	155	—	—	268	8	2	—	1
23	110	62	93	10	3	193	55	6	9	—
269	1,117	4,527	1,850	60	51	453	781	789	1,252	643
231	1,049	4,066	1,673	55	24	307	749	571	1,220	631
72	359	1,850	312	8	1	84	244	49	259	159
64	265	402	120	5	*	54	28	72	638	68
68	75	1,615	247	2	15	70	147	74	135	318
7	110	44	443	8	*	18	75	105	4	72
19	26	44	325	1	—	57	12	60	25	6
*	143	95	219	26	—	11	219	200	135	7
*	22	11	1	—	—	4	20	—	21	—
—	3	—	4	4	—	1	—	5	—	—
—	46	5	2	1	7	8	4	6	3	1
30	68	461	177	5	27	146	32	219	33	13
—	5	320	19	1	*	3	3	103	1	4
—	16	3	27	—	—	64	19	33	6	4
—	27	37	41	—	20	53	3	2	16	—
—	*	29	29	—	—	10	4	77	2	5
—	3	2	16	—	—	*	—	—	—	—
38	17	70	45	4	7	16	3	4	8	—
703	4,413	16,625	2,827	9,045	2,234	3,301	4,560	1,719	210	329
223	422	441	215	18	20	275	79	1,438	42	16
31	2,212	47	123	3,876	1,971	1,741	621	14	61	4
2	109	182	228	2	45	684	1,136	6	3	3
—	—	8,222	—	45	—	—	4	—	—	—
42	14	45	190	3	88	90	1,143	47	13	26
*	29	494	106	—	—	4	—	22	3	—
371	47	1,414	1,001	—	—	136	768	2	63	271
—	79	93	172	3,352	81	26	2	*	—	—
4	89	1,337	53	*	1	9	342	17	*	3
15	162	126	334	—	8	46	149	—	19	1
*	20	2,832	11	—	—	3	1	135	1	—
13	20	1,387	338	—	—	74	10	6	3	—
—	264	—	—	*	—	159	13	25	—	—
—	54	—	3	1,317	—	*	6	—	—	—
—	892	5	53	431	20	54	287	9	2	4
59	355	2,885	177	5	—	259	28	1,692	27	73
59	282	2,627	83	5	—	115	10	71	25	59
*	73	258	94	—	—	144	18	1,621	2	14
31	222	318	141	35,522	102	198	25	372	16	*
—	18	5	28	34,890	3	10	—	—	5	—
23	181	301	103	1	—	1	4	367	6	—
—	1	—	—	1	1	*	3	5	—	—
—	—	—	—	—	—	—	—	—	—	*
8	22	11	10	630	98	185	18	—	5	—

SOURCE: U.S. Department of Commerce, Bureau of Census.

World Aluminum Statistics



French National Railroad



The aluminum industry is international by its very nature. From the extraction of its basic source material at bauxite sites located in a number of countries throughout the world to its fabrication and distribution in every nation on earth, the aluminum industry should be viewed in a world-wide perspective. This section attempts to provide data on two of the key aspects of world aluminum, world primary aluminum production and the apparent per capita consumption of aluminum for selected countries.

World production of primary aluminum in 1982 is estimated to have been 14,618 thousand short tons,* down 12.0 percent from 1981. World primary aluminum production is presented by country for the years 1972-1982 on pages 44 and 45.

Data on the consumption of aluminum on a per capita basis are presented for 40 countries. These countries represent three-quarters of the world's production of primary aluminum. The data are presented in a uniform statistical format for the years 1972-1982. The data for supply and consumption show ingot and mill product detail for imports and exports. Midyear population figures are presented as part of the calculation of consumption on a per capita basis for each country.

*Short tons are being used uniformly in these as well as preceding sections of the Review.

High speed trains on the French National Railroad make extensive use of aluminum. Cars on the so-called "bullet train" contain 4,466 pounds of aluminum each.

World Primary Aluminum Production

WORLD PRODUCTION DOWN 12.0 PERCENT

Estimated 1982 world production of primary aluminum totaled 14,618 thousand short tons, down 12.0 percent from the revised estimate of 16,614 thousand tons in 1981, according to Bureau of Mines data.

Over the decade 1972-1982 world production increased 21 percent, an annual growth rate of 1.9 percent.

Europe accounted for 44.3 percent of the world's 1982 production and North America, 33.0 percent. The remaining 23 percent came from Asia (9.7 percent), South America (5.6 percent), Oceania (4.0 percent) and Africa (3.4 percent).

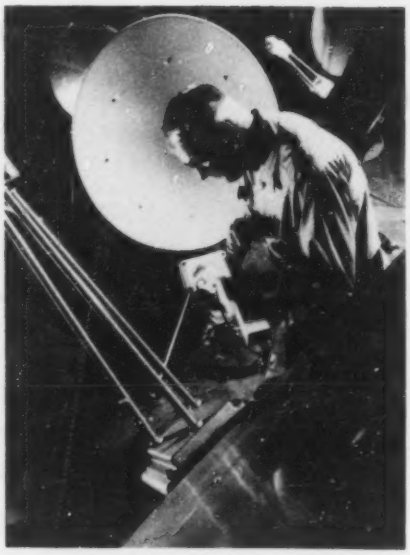
The world's largest producing countries were the United States, the U.S.S.R., Canada, Japan, and the Federal Republic of Germany. These five nations produced 8,034 thousand tons of aluminum last year, almost 55 percent of the total.

World Primary Aluminum Production

Thousands of short tons

COUNTRY	1982p	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
WORLD TOTAL(1)	14,618	16,614r	16,955r	16,065r	15,577r	15,189	13,913	13,387	14,516	13,364	12,133
NORTH AMERICA—Total	4,831	6,226r	6,361r	6,023r	6,008	5,659	4,996	4,901	6,073	5,610	5,178
Canada	1,174	1,230r	1,184	952r	1,156	1,073	698	978	1,125	1,038	1,012
United States	3,609	4,948	5,130	5,023	4,804	4,539	4,251	3,879	4,903	4,529	4,122
Mexico	48	48r	47r	48	48	47	47	44	45	43	44
SOUTH AMERICA—Total	821	816r	845r	716r	402r	351	303	271	233	206	182
Argentina	155	152r	147r	131r	54r	55	48	27	1	—	—
Brazil	331	283	287	263r	205	184	153	134	139	123	107
Surinam	66	35r	51	71	61	64	51	46	38	57	47
Venezuela	269	346r	360r	251	82	48	51	64	55	26	28
ASIA—Total(1)	1,421	1,870r	2,127	2,033r	2,090r	2,171	1,861	1,774	1,677	1,767	1,594
Bahrain	176	155	139	139	135	134	135	128	130	113	69
China, Mainland(1)	410	400	400	400	400	385	350	220	165	165	150
China, Taiwan	11	34r	70	62	56	33	28	31	35	39	35
India	225	235	204	233	236	197	231	184	142	170	197
Iran	6	6	11	15	28	23	34	56	54	37	7
Japan	387	849	1,203	1,114r	1,166	1,310	1,013	1,117	1,232	1,209	1,119
North Korea(1)	11	11	11	11	11	11	11	—	—	—	—
South Korea	17	19r	23	24	22	20	20	20	19	34	17
Turkey	40	44r	38	35	36r	57	39	18	—	—	—
United Arab Emirates	138	117	28	—	—	—	—	—	—	—	—
AFRICA—Total	493	495r	482	414	377	414	382	301	308	273	268
Cameroon	41	41r	48	48	54	61	64	57	52	49	51
Egypt	165	148r	132	85	111	98	65	2	—	—	—
Ghana	191	210	207	186	123	169	167	158	173	166	159
South Africa	96	96r	95	95	89	86	86	84	83	58	58
OCEANIA—Total	582	588r	506r	467r	457	433	410	356	364	356	324
Australia	399	418	335r	297r	290	273	256	236	242	228	227
New Zealand	183	170r	171	170	167	160	154	120	122	128	97

(1) Estimated by the Bureau of Mines, Department of the Interior
(2) Includes secondary unalloyed ingot
(3) Reflects series revision incorporating the United Kingdom into the Common Market in 1973
(4) Includes primary alloyed ingot



A worker adjusts the receiver box on a aluminum dish antenna used to pull in telecommunications signals from satellites orbiting the earth.

COUNTRY	1982p	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
EUROPE—Total[1]	6,480	6,619r	6,634r	6,412r	6,243	6,162	5,961	5,784	5,758	5,152	4,587
Common Market Countries—Total[3]	2,237	2,407r	2,440r	2,385r	2,374	2,340	2,219	2,157	2,195	1,831	1,603
France	430	480	476	436r	431	440	424	422	434	396	433
Germany, West	794	804r	806	817	816	818	768	747	759	587	490
Greece	162	162r	161	155	159	143	148	150	164	159	143
Italy	298	298r	299r	297	298	287	228	210	238	203	165
The Netherlands	288	289	285r	284	288	266	282	288	277	209	183
United Kingdom	265	374	413	396	382	386	369	340	323	277	189
European Free Trade Assoc.—Total	1,065	1,066r	1,090r	1,095r	1,064	1,048	1,028	994	1,096	1,045	932
Austria	104	104	104	102	101	101	98	98	101	98	92
Iceland	85	82	81	80	81	82	72	68	77	79	50
Norway	694	698r	720r	732r	704	686	681	656	731	684	614
Sweden	91	91	90r	90	90	91	91	85	91	90	84
Switzerland	91	91	95	91	88	88	86	87	96	94	92
Other—Total[1]	3,168	3,146r	3,104r	2,932	2,805	2,774	2,714	2,633	2,467	2,276	2,052
Czechoslovakia[1][2]	41	41r	42	41	41	40	40	48	55	53	47
Germany, East[1]	66	66	66	66	72	72	65	65	65	101	65
Hungary	82	82	81	79	79	79	78	77	76	75	75
Poland[4]	47	73	105	106	110	115	114	113	112	112	112
Romania[5]	229	277	266	239	235	230	224	225	206	156	134
Spain	402	437	426	286	234	233	232	232	211	179	159
U.S.S.R.[1]	2,070	1,980r	1,940	1,930	1,840	1,810	1,760	1,690	1,580	1,500	1,380
Yugoslavia	231	190r	178r	185	194	195	201	183	162	100	80

r—Revised
p—Preliminary
Detail may not add to totals due to rounding.
SOURCE: Bureau of Mines, U.S. Department of the Interior

Aluminum Supply and Apparent Consumption — Selected Countries

PER CAPITA CONSUMPTION DROPS 4.1%

Per capita aluminum consumption for those countries which provided both 1982 and 1981 data, dropped an average of 4.1% in 1982 as compared with 1981. Of the 35 countries which responded to the 1982 survey, only 12 (34%) showed increased usage in 1982, while the remainder (66%) indicated decreased usage.

The United States was again the largest user of aluminum on a per capita basis (52.5). Other large users were Norway (49.8), W. Germany (43.0) and Japan (41.9).

Per Capita Aluminum Consumption Formula

1. +Primary aluminum production
2. ±Government stockpile adjustment
3. +Imports of ingot
4. +Imports of mill products (aluminum alloy weight)
5. +Recovery of secondary aluminum alloys (from domestic and imported scrap)
6. −Exports of ingot
7. −Exports of mill products (aluminum alloy weight)
8. =Apparent aluminum consumption
9. +Beginning of year inventory
10. −End of year inventory
11. ±Inventory change
12. =Aluminum consumption (with inventory change)
13. ÷Mid-year population
14. =Per capita consumption (lbs) (without inventory change)
15. =Per capita consumption (lbs) (with inventory change)

DESCRIPTION:

The Aluminum Association, in conjunction with industry associations in foreign countries, and, in some instances appropriate government agencies, is developing a joint program to compile uniform statistical data showing total supply and apparent consumption. Total supply for an individual country consists of primary production, imports, and secondary recovery. Apparent consumption is equal to the sum of these sources of total supply less exports and inventory changes. Production of primary aluminum for foreign countries is tabulated for the years 1972-1982 on pages 44 and 45.

The tables on pages 48-60 show total supply and apparent consumption corresponding to the above format for the following countries:

Argentina	Mexico
Australia	The Netherlands
Austria	New Zealand
Bahrain	Nicaragua
Belgium	Norway
Brazil	Panama
Cameroon	The Philippines
Canada	Portugal
Denmark	El Salvador
Finland	Saudi Arabia
France	Singapore
Germany, West	South Africa
Greece	Spain
Iceland	Sweden
Indonesia	Switzerland
Iran	Taiwan
Ireland	Turkey
Israel	United Kingdom
Italy	United States
Japan	Venezuela

The format for compiling total supply and apparent consumption data is shown below.

In order to develop a basis for showing relative aluminum usage by country and to provide a measure of trend over time, per capita consumption data have been calculated for each country. For this purpose mid-year population estimates have been used. It is important to emphasize that these estimates are not the only way of measuring relative consumption data among countries. Obviously, the composition of a country's population, standard of living, industrialization, climate, availability and economies of other materials, and a number of other important considerations affect the per capita use of aluminum. The formula is used because it is simple and permits the Association to compile data for more countries, with their cooperation, than can be compiled using more detailed information.

When data for individual lines are not available or are not appropriate, they are omitted. Inventory changes cover suppliers' inventories only. Consumption estimates exclude changes in customer inventories.

The components of the formula are numbered and cross referenced to the country details on pages 48-61.

A summary of per capita consumption covering the years 1972-1982 for each of the countries is shown on page 47.

Per Capita Aluminum Consumption of Selected Countries

Pounds per person per year

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
Argentina*	5.0	4.1	4.9	7.1	4.9	5.9	6.2	8.3	9.0	8.7	9.7
Australia*	36.7	41.4r	38.9	37.6	32.5	31.3	31.0	25.7	33.6	29.1	23.4
Austria*	23.8	26.5	27.6	25.0	23.7	24.7	23.3	24.4	20.4	19.8	17.9
Bahrain*	10.8	13.2r	20.3	27.5	15.1	22.5	23.7	24.9	26.0	18.3	19.1
Belgium	19.8	16.0	20.6	20.3	19.6	21.4	23.4	16.5	23.0	21.9	18.1
Brazil*	5.5	5.3	6.5	6.4	5.8	5.8	5.3	5.2	4.9	4.1	3.6
Cameroon	3.6	3.5	6.4	4.7	3.9	5.3	8.4	6.8	8.0	3.6	5.8
Canada*	30.8	36.1	35.5	37.1	35.7	31.5	30.8	28.4	35.4	33.1	30.6
Denmark	32.4	29.8	30.8	34.2	32.2	28.0	27.4	19.6	25.9	25.6	21.3
Finland	15.4	16.0	17.2	17.8	14.8	19.3	20.6	21.3	22.4	17.5	14.6
France*	27.3	26.0	30.1	28.1	25.4	26.0	26.5	20.5	25.0	24.8	21.6
Germany, West*	43.0	44.8	48.6	46.6	42.9	41.8	42.6	32.2	36.1	38.8	33.7
Greece	10.0	22.0r	21.8r	15.7	8.7	9.0	8.1	9.8	8.6	7.0	6.9
Iceland	23.4	27.9	21.9	20.4	15.9	18.9	18.2	16.5	22.5	16.0	20.0
Indonesia	na	na	na	0.6	0.6	0.6	0.5	2.9	1.5	1.9	0.2
Iran	na	na	na	na	na	4.3*	4.2*	3.0*	2.8*	2.0*	1.7
Ireland	8.8	9.1	9.6	10.9	10.6	7.9	9.1	4.1	10.6	7.8	3.4
Israel	na	na	na	na	na	9.4	9.9	na	16.9	9.4	9.7
Italy*	27.1	27.6r	32.4r	28.0r	24.7r	24.3r	21.8	15.2	23.3	21.0	17.7
Japan*	41.9	41.9r	45.8	42.6	42.8	35.4	35.8	26.9	32.5	37.7	32.4
Mexico*	4.9	6.5	5.6	4.9	4.1	2.6	3.4	3.5	3.8	3.8	3.4
The Netherlands	24.9*	20.1r*	27.2*	26.0*	23.0*	25.1*	29.1*	18.3*	17.1*	14.8*	13.4
New Zealand*	15.4	20.5r	17.2	19.0	17.1	17.6	20.7	15.1	27.3	23.0	13.2
Nicaragua	na	na	na	na	0.5	1.3	1.0	1.4	1.8	1.1	1.0
Norway*	49.8	41.7	50.0	53.1	46.1	50.9	55.8	43.6	51.6	37.8	37.5
Panama	1.8	2.2	2.0	2.0	1.5	1.8	2.6	2.6	3.8	3.4	2.9
Repl. of the Philippines	1.2	0.5	0.9	1.6r	0.9r	1.0r	1.0r	0.5	0.9	0.8	0.6
Portugal	na	10.7	7.7	6.7	5.9	6.9	5.6	2.7	7.9	5.1	5.8
El Salvador	0.5	0.6	0.4	1.0	1.0	0.4	1.1	0.4	0.5	0.6	0.4
Saudi Arabia	9.4	25.1	24.8	19.0	17.5	14.1	5.2	2.8	2.5	na	na
Singapore	23.0	25.3	20.1	20.4	15.0	15.1	12.5	7.8	14.8	15.0	10.2
South Africa*	9.0	10.0	9.9(1)	5.8	5.1	5.2	6.0	6.2	6.5	5.7	5.5
Spain*	11.2e	11.3	14.2	12.8	12.5	14.1	13.4	11.6	13.7	12.1	9.8
Sweden*	38.8	34.0	34.4	36.9	32.6	34.5	40.8	39.8	42.5	40.5	34.0
Switzerland*	33.3	34.0	37.7	31.4	29.8	28.6	27.9	22.2	34.9	31.1	27.9
Taiwan, Republic of China*	13.7	14.5	13.4	15.0	12.8	10.5	8.7	6.9	6.6	7.8	4.8
Turkey	2.8	2.2	2.1	2.5	2.5	4.3	3.4	3.7	1.7	2.5	2.5
United Kingdom	20.1	20.7r	21.6	22.1	26.6	26.4	25.1	21.7	27.4	27.5	24.3
United States*	52.5	55.2r	56.8	65.8	65.9	60.3	57.1	44.9	60.4	65.1	55.7
Venezuela*	13.9	9.0	15.2	14.8r	11.3	9.7	8.1	6.1	5.2	4.8	3.5

**Adjusted for inventory change* *r—Revised* *na—Not available at publication time*
e—Estimated
(1) See footnote (3) page 58.

Per Capita Aluminum Consumption

Thousands of short tons

ARGENTINA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	151.5	147.6r	146.8	130.5	54.5	57.8	47.5	26.1	0.8	—	—
3. +Imports of ingot		—	—	—	—	0.1	22.3	53.6	93.4	80.7	87.3
4. +Imports of mill products	11.6e	6.4r	4.4	1.5	0.6	0.3	0.1	3.7	1.1	7.2	9.6
5. +Recovery of secondary	5.5e	5.5e	7.7e	8.8e	8.8e	9.7e	15.9e	18.3e	21.4e	18.6e	20.1e
6. −Exports of ingot	74.5	97.2r	69.9	34.5	8.3	—	—	—	—	—	—
7. −Exports of mill products	17.6	12.1	9.8	4.5	11.2	3.7	1.2	1.7	1.4	2.6	0.7
8. =Apparent aluminum consumption	76.4	50.2	79.2	101.8	44.4	64.2	84.5	100.0	115.3	103.9	116.3
11. ±Inventory change	+4.4	−7.5	+11.0	+6.6	−20.5	−13.2	+4.5	−6.0	+3.1	−3.0	−1.8
12. =Aluminum consumption	72.0	57.7	68.2	95.2	64.9	77.4	80.0	106.0	112.2	106.9	118.1
13. ÷Mid-year population (mill.)	28.7e	28.3	27.9	26.8	26.5	26.1	25.7	25.4	25.0	24.7	24.4
14. =Per capita consumption (lbs.) *(1)*	5.3	3.5	5.7	7.6	3.3	4.9	6.6	7.9	9.2	8.4	9.5
15. =Per capita consumption (lbs.) *(2)*	5.0	4.1	4.9	7.1	4.9	5.9	6.2	8.3	9.0	8.7	9.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
e—Estimated

SOURCE: ALUAR Alumino Argentino S.A.I.C.—Ministerio Defensa (COPEDESMEL).

AUSTRALIA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	419.1	417.4r	333.5	301.1	293.7	237.7	254.9	234.9	240.0	227.9	226.4
3. +Imports of ingot	14.6	9.3	8.8	3.9	0.2	—	—	0.3	10.4	8.9	0.9
4. +Imports of mill products	14.4	15.9	11.8	8.9	4.0	4.5	4.8	4.6	11.9	4.2	3.2
5. +Recovery of secondary	44.9	48.9r	41.9	33.6	26.9	27.1	30.1	27.1	40.0	31.6	21.8
6. −Exports of ingot	204.6	135.1r	39.2	69.6	84.1	75.7	77.7	83.9	55.8	62.3	109.5
7. −Exports of mill products	35.9	28.0	20.3	17.7	5.3	3.6	1.5	1.7	6.2	6.7	4.4
8. =Apparent aluminum consumption	240.5	328.4r	336.5	260.1	235.3	226.0	210.6	181.3	240.3	203.6	138.4
11. ±Inventory change	−26.1	−20.9r	+52.2	−10.7	+4.2	+5.6	+1.1	+6.3	+16.3	+11.3	−12.3
12. =Aluminum consumption	278.4	307.4r	284.3	270.8	231.0	220.4	209.5	175.0	224.0	192.3	150.7
13. ÷Mid-year population (mill.)	15.2	14.9	14.6	14.4	14.2	14.1	13.5	13.6	13.3	13.2	12.9
14. =Per capita consumption (lbs.) *(1)*	31.7	44.3r	46.1	36.1	33.1	32.1	31.2	26.6	36.1	30.8	21.5
15. =Per capita consumption (lbs.) *(2)*	36.7	41.4r	38.9	37.6	32.5	31.3	31.0	25.7	33.6	29.1	23.4

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change—primary metal only

SOURCE: Aluminium Development Council of Australia Limited

AUSTRIA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	103.5	103.8r	104.1	102.2	100.6	101.2	97.7	98.3	100.8	98.2	92.6
3. +Imports of ingot	42.7	36.6	38.8	33.8	16.4	21.2	23.1	19.8	19.6	18.7	15.2
4. +Imports of mill products	46.7	41.4r	43.2	40.6	33.0	32.0	26.9	19.1	27.3	24.0	18.2
5. +Recovery of secondary	15.7	15.2	15.8	9.6	10.3	11.7	9.4	6.8	7.9	9.5	6.9
6. −Exports of aluminum ingot	28.2	27.6	10.8	11.4	12.9	9.6	9.5	9.4	24.1	29.9	32.3
7. −Exports of mill products	86.6	76.2	73.2	81.9	74.6	62.1	66.2	42.8	50.0	38.8	35.8
8. =Apparent aluminum consumption	93.7	93.4	117.8	92.9	72.8	94.4	81.4	91.8	81.5	81.8	64.8
11. ±Inventory change	+4.2	−6.0r	+14.3	−0.7	−16.1	+2.0	−6.1	—	+5.1	+7.5	−2.2
12. =Aluminum consumption	89.5	99.3r	103.5	93.6	88.8	92.4	87.5	91.8	76.4	74.3	67.0
13. ÷Mid-year population (mill.)	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
14. =Per capita consumption (lbs.) *(1)*	24.9	24.9	31.4	24.8	19.4	25.1	21.7	24.4	21.7	21.8	17.3
15. =Per capita consumption (lbs.) *(2)*	23.8	26.5	27.6	25.0	23.7	24.7	23.3	24.4	20.4	19.8	17.9

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Fachverband Der Metallindustrie Osterreichs

Detail may not add to totals due to rounding.

BAHRAIN

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	188.5	156.5r	139.0	140.1	135.7	136.8	135.7	129.0	132.4	113.6	88.2
5. +Recovery of secondary	1.7	—	—	—	—	—	—	—	—	—	—
6. −Exports of aluminum ingot	173.1	91.5	86.0	144.5	147.8	130.1	139.0	94.9	115.8	91.5	76.1
7. −Exports of mill products	13.2	16.5	18.7	6.6	5.5	3.3	3.3	2.2	2.2	2.2	—
8. =Apparent aluminum consumption	3.4	48.5	34.2	−11.0	−17.6	3.3	−6.6	32.0	14.3	19.9	12.1
9. +Beginning inventory	99.2	52.9	22.1	37.5	57.4	57.4	67.3	38.6	27.6	9.9	—
10. −Ending inventory	101.1	99.2r	52.9	22.1	37.5	57.4	57.4	67.3	38.6	27.6	9.9
11. ±Inventory change	+1.9	+46.3r	+30.8	−15.4	−19.9	—	−9.9	+28.7	+11.0	+17.7	+9.9
12. =Aluminum consumption	2.0	2.2r	3.4	4.4	2.3	3.3	3.3	3.3	3.3	2.2	2.2
13. ÷Mid-year population (mill.)	.371	.351	.335	.320	.305	.293	.279	.265	.254	.241	.230
14. =Per capita consumption (lbs.)(1)	18.3	276.4	204.2	na	na	22.5	na	241.5	112.6	165.1	105.2
15. =Per capita consumption (lbs.)(2)	10.8	13.2r	20.3	27.5	15.1	22.5	23.7	24.9	26.0	18.3	19.1

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
na Not available at publication time

SOURCE: Aluminium Bahrain B.S.C.

BELGIUM

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	294.8	270.0r	278.3	278.7	294.1	262.8	284.5	207.5	278.9	258.7	228.7
4. +Imports of mill products(1)	69.9	69.3r	71.5	96.0	84.7	83.0	86.3	59.0	61.5	55.7	43.9
5. +Recovery of secondary		—	—	1.1e	1.1e	3.3e	2.9e	2.2e	3.0e	3.0e	2.9e
6. −Exports of ingot	15.2	32.7r	21.6	11.9	11.2	14.4	15.6	11.0	24.4	22.3	9.4
7. −Exports of mill products(1)	251.2	227.4r	226.1	270.5	256.1	241.8	231.6	184.8	202.2	186.3	172.6
8. =Apparent aluminum consumption(2)	98.2	79.3	102.2	99.3	96.2	104.7	114.4	81.1	112.7	106.0	88.0
13. +Mid-year population (mill.)	9.9	9.9	9.9	9.8	9.8	9.8	9.8	9.8	9.8	9.7	9.7
14. =Per capita consumption (lbs.) (3)	19.8	16.0	20.6	20.3	19.6	21.4	23.4	16.5	23.0	21.9	18.1

NOTES:
(1) Excludes thin foil
(2) Excludes thin foil, welded tubes and blanks Stated consumption will not add from lines 3, 4, 5, 6, & 7
(3) Without inventory change
e—Estimated

SOURCE: Federation Des Enterprises De Metaux Non Ferraux

BRAZIL

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	329.6	282.6r	287.3r	262.5	205.5	184.2	153.4	133.7	125.2	123.1	107.6
3. +Imports of ingot	11.9	31.2r	51.5	57.1	66.6	91.3	86.1	86.8	115.5	57.0	48.5
4. +Imports of mill products	4.3	9.6r	24.6	30.1	16.3	32.3	17.0	17.2	23.2	13.7	10.3
5. +Recovery of secondary	41.7	41.1	50.8	59.3	54.2	36.9	30.9	22.7	24.7	20.4	14.3
6. −Exports of ingot	7.7	2.4	—	—	—	—	—	—	—	—	—
7. −Exports of mill products	13.2	20.5r	12.7r	9.5	4.3	3.1	2.0	2.0	2.0	1.1	1.3
8. =Apparent aluminum consumption	366.5	341.6r	401.5r	399.5	338.3	341.6	285.4	258.5	286.6	213.1	179.3
11. ±Inventory change	+22.7	+22.9r	+12.0r	+26.7	+7.1	+19.4	—	−18.4	+34.5	+6.1	+2.9
12. =Aluminum consumption	343.8	318.7r	389.4r	372.8	331.2	322.2	285.4	276.9	252.1	207.0	176.5
13. ÷Mid-year population (mill.)	125.0	122.0	119.1	116.3	113.5	110.8	108.1	105.5	103.0	100.5	98.1
14. =Per capita consumption (lbs.) (1)	6.0	5.7	6.7	6.9	6.0	6.2	5.3	4.9	5.6	4.2	3.7
15. =Per capita consumption (lbs.) (2)	5.5	5.3	6.5	6.4	5.8	5.8	5.3	5.2	4.9	4.1	3.6

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Associacao Brasileira do Aluminio

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

Thousands of short tons

CAMEROON

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	87.0	72.1	47.4	49.2	45.5	50.9	53.7	57.2	51.6	48.6	50.9
3. +Imports of ingot	—	—	—	0.9	0.1	—	—	—	—	—	—
4. +Imports of mill products	1.0	1.0	1.0	0.4	0.3	1.3	2.0	0.9	0.4	0.7	0.3
6. −Exports of ingot	61.1	49.1	14.7	22.3	16.9	26.3	22.9	27.6	23.5	30.9	32.8
7. −Exports of mill products	11.8	7.7	5.6	11.0	11.1	6.0	4.9	7.9	4.6	8.0	7.2
8. =Apparent aluminum consumption	15.1	16.3	28.2	17.2	18.0	20.0	27.9	22.6	23.9	10.4	11.2
11. ±Inventory change	−0.6	+1.7	+2.0	−1.9	+2.5	−1.0	+0.3	+0.8	−1.2	−0.7	−6.4
12. =Aluminum consumption	15.7	14.7	26.2	19.1	15.4	20.9	27.6	21.8	25.1	11.0	17.6
13. ÷Mid-year population (millions)	8.65	8.50	8.25	8.06	7.91	7.91	6.53	6.40	6.28	6.17	6.06
14. =Per capita consumption (lbs.) (1)	3.5	3.7	6.8	4.3	4.6	5.1	8.6	7.1	7.6	3.4	3.7
15. =Per capita consumption (lbs.) (2)	3.6	3.5	6.4	4.7	3.9	5.3	8.4	6.8	8.0	3.6	5.8

na Not available at publication time

SOURCE: Societe de Vente de l'Aluminium Pechiney

CANADA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	1,179.4	1,232.5	1,183.9	951.6	1,158.0	1,076.3	695.5	969.9	1,111.8	1,030.0	1,000.0
3. +Imports of ingot	26.9	15.8	10.9	26.5	12.7	22.9	24.9	20.1	52.9	49.5	38.3
4. +Imports of mill products	121.9	137.9	130.2	158.9	118.7	106.9	102.9	67.7	119.2	118.1	108.1
5. +Recovery of secondary	55.1	71.6e	71.8	93.1	82.5	53.2	47.0	42.9	39.9	42.7	35.2
6. −Exports of ingot	988.1	799.7	865.0	606.8	950.8	722.3	559.4	561.0	751.2	769.9	770.2
7. −Exports of mill products	46.5	44.6	43.7	39.8	43.9	48.0	31.1	26.9	52.1	31.4	40.0
8. =Apparent aluminum consumption	348.7	613.4	488.1	583.9	377.2	489.1	279.8	512.7	520.5	439.0	371.4
11. ±Inventory change	−29.8	+176.4	+63.8	+143.7	−42.1	+122.7	−75.4	189.3	123.9	73.3	37.9
12. =Aluminum consumption	378.4	437.1	424.3	440.1	419.2	366.4	355.2	323.4	396.6	365.7	333.5
13. ÷Mid-year-population (mill.)	24.6	24.2	23.9	23.7	23.5	23.3	23.1	22.8	22.4	22.1	21.8
14. =Per capita consumption (lbs.)(1)	28.3	50.7	37.5	49.3	32.1	42.0	24.2	45.0	46.4	39.7	34.0
15. =Per capita consumption (lbs.)(2)	30.8	36.1	35.5	37.1	35.7	31.5	30.8	28.4	35.4	33.1	30.6

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
e—Estimated
r—Revised

SOURCE: Statistics Canada and Alcan Canada Products Ltd.

DENMARK

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	27.2	23.4	26.7	24.8	20.7	17.4	14.6	7.6	9.4	7.8	5.0
4. +Imports of mill products	63.3	59.6	65.7	69.3	64.0	59.5	62.6	43.7	59.4	57.3	47.2
5. +Recovery of secondary	35.6	33.4	27.4	34.3	30.5	22.6	15.4	16.6	19.1	16.5	17.2
6. −Exports of aluminum ingot	22.0	22.0	20.8	23.7	19.0	15.0	10.4	8.2	9.9	7.3	7.7
7. −Exports of mill products	21.3	18.2	20.0	17.1	13.8	13.3	12.7	10.1	12.6	10.1	8.4
8. =Apparent aluminum consumption	82.8	76.2	79.0	87.6	82.3	71.2	69.6	49.6	65.4	64.3	53.2
13. ÷Mid-year population (mill.)	5.12	5.12	5.12	5.12	5.10	5.09	5.07	5.06	5.05	5.02	4.99
14. =Per capita consumption (lbs.)(1)	32.4	29.8	30.8	34.2	32.2	28.0	27.4	19.6	25.9	25.6	21.3

NOTES:
(1) Without inventory change

SOURCE: Danmarks Statistik

Detail may not add to totals due to rounding.

FINLAND

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	30.0	31.7	29.5	27.4	23.9	31.5	27.0	21.2	25.6	19.9	16.1
4. +Imports of mill products	24.7	36.6	45.9	40.9	31.1	32.6	34.8	29.3	38.9	28.7	25.5
5. +Recovery of secondary	9.5	7.2	7.9	8.5	9.8	10.3	8.0	6.8	6.4	8.8	6.9
6. −Exports of ingot	6.9	5.4	4.3	1.5	2.9	3.6	1.3	0.5	0.9	1.5	0.8
7. −Exports of mill products	20.0	31.7	37.7	32.8	26.9	25.0	19.8	17.7	17.2	15.2	13.9
8. =Apparent aluminum consumption	37.3	38.4	41.2	42.7	35.1	45.8	48.7	50.2	52.8	40.7	33.8
13. ÷Mid-year population (mill.)	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.7	4.6
14. =Per capita consumption (lbs.)(1)	15.4	16.0	17.2	17.8	14.8	19.3	20.6r	21.3	22.4	17.5	14.6

NOTES:
(1) Without inventory change

SOURCE: Central Statistical Office of Finland

FRANCE

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	430.3	480.2	476.1	435.5	431.4	439.6	424.5	421.7	433.7	395.6	434.0
3. +Imports of ingot	388.0	331.1	366.4	347.6	320.9	303.5	277.1	240.2	289.8	253.3	214.0
4. +Imports of mill products	225.3	209.8	231.4	205.4	158.7	156.1	187.2	115.3	144.6	147.1	117.8
5. +Recovery of secondary	169.4	187.2	187.4	182.7	177.2	168.1	151.0	125.7	140.6	139.2	125.5
6. −Exports of ingot	201.4	210.0	195.5	173.7	183.4	182.8	164.5	180.7	198.2	202.4	182.3
7. −Exports of mill products	289.9	273.9	253.5	286.5	236.6	207.5	178.0	142.1	152.1	145.5	129.3
8. =Apparent aluminum consumption	721.8	724.3	812.2	710.9	668.3	677.0	697.3	580.1	658.3	587.3	579.7
11. ±Inventory change	−20.0	+24.3	+4.2	−39.9	−6.7	−11.8	−4.2	+40.9	+7.8	−58.5	+20.6
12. =Aluminum consumption	741.7	701.1	808.0	750.8	675.0	688.8	701.5	539.2	650.5	645.8	559.1
13. ÷Mid-year-population (mill.)	54.3	53.9	53.7	53.5r	53.1	53.0	52.9	52.9	52.1	52.1	51.7
14. =Per capita consumption (lbs.)(1)	26.7	26.9	30.3	26.6r	25.2	25.5	26.4	22.0	25.2	22.5	22.4
15. =Per capita consumption (lbs.)(2)	27.3	26.0	30.1	28.1r	25.4	26.0	26.5	20.5	25.0	24.8	21.6

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Societe de Vente de l'Aluminium Pechiney

GERMANY, WEST

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	796.7	803.5	805.5	817.8	815.3	817.7	768.4	747.1	759.2	587.2	489.9
3. +Imports of ingot	623.1	551.2	671.1	563.8	478.4	485.5	459.9	317.0	379.7	448.6	396.9
4. +Imports of mill products	289.1	264.7	313.2	289.1	226.5	235.7	220.6	151.3	155.6	174.3	154.8
5. +Recovery of secondary	438.8	455.7	468.5	468.9	434.7	390.4	353.6	296.8	326.4	327.7	278.0
6. −Exports of ingot	281.5	278.9	246.6	273.1	299.4	219.5	310.2	176.1	192.4	115.3	94.0
7. −Exports of mill products	495.7	448.5	427.6	436.0	383.8	332.8	302.7	211.6	297.9	228.3	182.7
8. =Apparent aluminum consumption	1,370.6	1,347.6	1,584.0	1,430.6	1,271.7	1,377.0	1,189.6	1,124.5	1,130.6	1,194.2	1,042.9
11. ±Inventory change	+52.9	−32.2	+94.6	−61.9	−44.2	+94.5	−121.3	+129.2	+10.6	−9.3	+2.0
12. =Aluminum consumption	1,317.7	1,379.7	1,489.4	1,492.5	1,315.9	1,282.5	1,310.9	995.3	1,120.0	1,203.5	1,040.9
13. ÷Mid-year population (mill.)	61.3	61.7r	61.3	61.4	61.3	61.4	61.5	61.8	62.1	62.0	61.7
14. =Per capita consumption (lbs.)(1)	44.8	43.8	51.7	46.6	41.5	44.9	38.7	36.4	36.4	38.5	33.8
15. =Per capita consumption (lbs.)(2)	43.0	44.8	48.6	48.6	42.9	41.8	42.6	32.2	36.1	38.8	33.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

Detail may not add to totals due to rounding.

SOURCE: Aluminium-Zentrale e.V.

Per Capita Aluminum Consumption—Continued

Thousands of short tons

GREECE

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	148.7(a)	204.6r	202.8r	185.2	160.5	144.8	148.0	149.6	164.2	155.4	143.3
3. +Imports of ingot	2.3	3.1	0.1	0.3	0.3	5.0	4.0	1.0	1.9	1.9	3.2
4. +Imports of mill products	3.5	4.7	4.3	3.9	3.3	4.2	2.8	2.0	2.4	2.5	3.5
6. −Exports of aluminum ingot	73.4	76.3	66.4	81.6	93.9	85.4	98.0	98.2	112.2	115.5	111.3
7. −Exports of mill products	32.1	29.4	36.0	33.1	29.2	26.7	19.8	10.1	17.7	12.6	8.2
8. =Apparent aluminum consumption	49.0e	106.7r	104.4r	74.7	41.0	41.9	37.0	44.3	38.6	31.5	30.5
13. ÷Mid-year population (mill.)	9.8	9.7	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.9
14. =Per capita consumption (lbs.)(1)	10.0e	22.0r	21.8r	15.7	8.7	9.0	8.1	9.8r	8.6	7.0	6.9

NOTES:
(1) Without inventory change
e — Estimated.
(a) Source: World Bureau of Metal Statistics.

SOURCE: National Statistical Service of Greece.

ICELAND

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	82.9	81.2	80.6	78.3	81.3	77.9	71.9	64.9	75.4	78.4	50.1
4. +Imports of mill products	2.8	3.2	2.5	2.0	3.2	2.1	2.0	1.7	2.3	1.7	2.1
6. −Exports of aluminum ingot	67.8	70.7	74.3	85.1	83.6	81.8	85.5	48.1	69.5	87.9	65.3
8. =Apparent aluminum consumption	17.9	13.8	8.8	−4.9	1.0	−1.8	−11.7	18.5	8.2	−7.8	−13.1
9. +Beginning inventory	22.2	11.6	5.3	12.5	13.2	17.1	30.8	14.0	8.2	17.5	32.7
10. −Ending inventory	37.3	22.2	11.6	5.3	12.5	13.2	17.1	30.8	14.0	8.2	17.5
11. ±Inventory change	+15.1	+9.6	+6.3	−7.2	−0.8	−3.9	−13.7	+16.8	+5.8	−9.4	−15.2
12. =Aluminum consumption	2.8	3.2	2.5	2.3	1.8	2.1	2.0	1.8	2.2	1.7	2.1
13. ÷Mid-year population (mill.)(1)	0.235	0.229	0.228	0.226	0.223	0.222	0.220	0.218	0.216	0.213	0.210
14. =Per capita consumption (lbs.)(2)	151.9	120.5	77.2	na	8.9	na	na	169.7	75.9	na	na
15. =Per capita consumption (lbs.)(3)	23.4	27.9	21.9	20.4	15.9	18.9	18.2	16.5	22.5	16.0	20.0

NOTES:
(1) Because of its small population, shown in fine detail
(2) Without inventory change
(3) Adjusted for inventory change

SOURCE: Icelandic Aluminium Co. Ltd.

INDONESIA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	na	na	na	16.7	13.5	12.9	9.3	7.7	5.2	2.9	0.3
4. +Imports of mill products	na	na	na	27.9	24.0	24.2	23.0	22.3	22.2	23.8	14.3
5. +Recovery of secondary	na	na	na	—	*	*	*	162.6	69.5	153.2	—
7. −Exports of mill products	na	na	na	0.2	0.1	0.2	0.2	—	—	—	—
12. =Apparent aluminum consumption	na	na	na	44.3	37.5	36.7	32.0	192.6	96.9	179.9	14.6
13. ÷Mid-year population	na	na	na	138.0	135.3	132.6	130.2	132.0	129.0	126.0	123.0
14. =Per capita consumption	na	na	na	0.6	0.6	0.6	0.5	2.9	1.5	2.9	0.2

NOTES:
(1) Without inventory change
na Not received at publication time

** Less than 50 tons*

Detail may not add to totals due to rounding.

SOURCE: Department of Mines and Energy, Indonesia

IRAN

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	na	na	na	na	na	23.2	33.8	45.3	55.9	35.9	7.2
3. +Imports of ingot	na	na	na	na	na	14.3	11.0	—	—	—	7.9
4. +Imports of mill products	na	na	na	na	na	18.7	20.9	3.0	9.9	17.2	9.8
5. +Recovery of secondary	na	na	na	na	na	5.5	7.2	17.0	7.1	1.1	1.1
6. −Exports of ingot	na	na	na	na	na	—	—	14.0	19.8	19.1	—
7. −Exports of mill products	na	na	na	na	na	—	—	—	0.2	—	—
8. =Apparent aluminum consumption	na	na	na	na	na	61.8	72.9	51.3	52.9	35.0	26.0
9. +Beginning inventory	na	na	na	na	na	13.9	11.7	9.4	6.2	4.8	—
10. −Ending inventory	na	na	na	na	na	3.3	13.9	10.6	13.2	5.7	—
11. ±Inventory change	na	na	na	na	na	10.5	2.2	+1.2	+7.0	+1.0	—
12. =Aluminum consumption	na	na	na	na	na	72.4	70.7	50.1	45.9	34.1	—
13. ÷Mid-year population (mill.)	na	na	na	na	na	33.5	34.0	33.5	32.5	31.6	30.9
14. =Per capita consumption (lbs.)(1)	na	na	na	na	na	3.7	4.3	3.1	3.2	2.2	1.7
15. =Per capita consumption (lbs.)(2)	na	na	na	na	na	4.3	4.2	3.0	2.8	2.0	—

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
na Not received at publication time

SOURCE: Industrial Development and Renovation Organization of Iran

IRELAND

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports(1)	34.0	31.5	34.4	32.8	28.1	22.8	22.9	15.4	21.4	16.3	12.0
6. −Exports(1)	18.6	16.0	18.0	14.3	10.6	10.4	8.3	8.8	5.0	4.2	6.4
8. =Apparent aluminum consumption(2)	15.3	15.5	16.4	18.5	17.5	12.5	14.6	6.6	16.4	12.1	5.6
13. ÷Mid-year population (mill.)	3.4	3.4	3.4	3.4	3.3	3.2	3.2	3.2	3.1	3.1	3.0
14. =Per capita consumption (lbs.)(2)	8.8	9.1	9.6	10.9	10.6	7.9	9.1	4.1	10.6	7.8	3.4

NOTES:
(1) Includes ingot and mill products
(2) Without inventory change

SOURCE: Central Statistics Office, Dublin

ISRAEL

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	na	na	na	na	na	18.7	16.0	na	27.6	14.2	13.2
4. +Imports of mill products	na	na	na	na	na	12.1	15.1	na	3.6	3.0	4.8
5. +Recovery of secondary	na	na	na	na	na	1.1	1.1	na	0.3	0.4	0.2
6. −Exports of ingot	na	na	na	na	na	4.4	5.7	na	—	—	—
7. −Exports of mill products	na	na	na	na	na	10.5	8.8	na	2.8	2.1	2.7
8. =Apparent aluminum consumption	na	na	na	na	na	17.1	17.6	na	28.7	15.5	15.5
13. ÷Mid-year population (mill.)	na	na	na	na	na	3.6	3.6	na	3.4	3.3	3.2
14. =Per capita consumption (lbs.)(1)	na	na	na	na	na	9.4	9.9	na	16.9	9.4	9.7

NOTES:
(1) Without inventory change
na Not received at publication time

SOURCE: The Israel Aluminium Association

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

Thousands of short tons

ITALY

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	256.7	301.8	298.9	296.6	298.5	286.7	227.6	209.6	233.8	203.1	164.8
3. +Imports of ingot	232.8	230.2	325.0	260.8	210.0	215.5	216.5	122.4	282.2	202.4	191.0
4. +Imports of mill products	91.8	89.9	123.0	99.4	66.9	65.0	54.4	39.1	75.6	50.5	36.9
5. +Recovery of secondary	312.0	316.4	328.5	284.4	262.3	261.2	227.0	175.3	225.9	210.6	174.2
6. −Exports of ingot	59.6	54.9	13.0	24.7	76.4	26.7	10.4	36.7	25.7	15.5	13.8
7. −Exports of mill products	111.2	103.4	95.2	121.1	116.5	95.7	91.7	64.7	66.0	60.3	62.6
8. =Apparent aluminum consumption	722.4	780.0	967.2	795.4	644.8	706.1	623.4	445.0	725.8	590.8	490.6
11. ±Inventory change	−41.9	+5.3	+63.2	+11.4r	−41.9	+35.7	+10.6	+20.0	+78.2	+14.0	+11.4
12. =Aluminum consumption	764.3	774.7	904.0	784.1r	686.7	670.4	612.8	425.0	647.6	576.8	479.2
13. ÷Mid-year population (mill.)	56.3	56.1r	55.9r	55.8r	55.7r	55.4r	56.2	55.8	55.4	54.9	54.2
14. =Per capita consumption (lbs.)(1)	25.6	27.8r	34.6r	28.4r	23.1r	25.6r	22.2	15.9	26.2	21,5	15.1
15. =Per capita consumption (lbs.)(2)	27.1	27.6r	32.4r	28.0r	24.7r	24.3r	21.8	15.2	23.3	21.0	17.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
r—Revised

SOURCE: Association Nazionale Industrie Metalli Non Ferrosi

JAPAN

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	391.4	856.3	1,207.8	1,118.0	1,170.4	1,314.9	1,017.7	1,120.1	1,238.6	1,215.5	1,118.7
2. ±Stockpile adjustment	−90.5	−24.3	—	24.3	−13.6	10.5	10.5				
3. +Imports of ingot	1,594.6	1,244.8	1,003.2	825.0	815.9	588.4	474.1	417.1	527.7	524.3	357.9
4. +Imports of mill products	30.4	33.1	49.5	35.4	29.6	23.9	22.9	24.1	47.1	29.6	8.5
5. +Recovery of secondary	617.8	606.4r	620.6	524.8	545.0	431.8	326.5	226.2	253.4	286.4	283.2
6. −Exports of ingot	7.4	13.4	8.4	8.8	60.2	109.8	76.8	92.1	38.4	3.2	9.6
7. −Exports of mill products	170.7	125.6	80.5	108.5	163.7	95.5	73.0	56.6	36.4	32.9	40.1
8. =Apparent aluminum consumption	2,365.6	2,577.3r	2,792.1	2,410.3	2,323.4	2,164.4	1,702.0	1,638.8	1,992.0	2,019.7	1,718.6
9. +Beginning inventory	298.4	194.4	86.0	149.8	284.6	134.6	442.4	292.6	94.1	127.5	124.0
10. −Ending inventory	171.3	298.4	194.4	86.0	149.8	284.6	134.6	442.4	296.2	94.2	127.5
11. ±Inventory change	−127.1	+104.1	+108.3	−63.8	−134.8	+150.0	−307.8	+146.2	+202.1	−33.3	+3.5
12. =Aluminum consumption	2,492.7	2,473.2r	2,683.8	2,474.1	2,458.2	2,014.4	2,009.8	1,492.6	1,789.9	2,053.0	1,715.2
13. ÷Mid-year population (mill.)	118.8	117.9	117.1	116.1	114.9	113.9	112.4	111.0	110.1	108.9	106.0
14. =Per capita consumption (lbs.)(1)	39.9	43.7	47.7	41.5	40.4	38.0	30.3	29.5	36.2	37.1	32.4
15. =Per capita consumption (lbs.)(2)	41.9	41.9r	45.8	42.6	42.8	35.4	35.8	26.9	32.5	37.7	32.4

NOTES:
(1) Without inventory change
r—Revised

SOURCE: Japan Aluminium Federation

MEXICO

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	45.4	47.6	47.0	47.6	47.5	47.1	46.7	44.0	45.4	43.2	43.5
3. +Imports of aluminum ingot	35.6	64.8	70.0	61.8	43.4	9.3	17.2	13.1	28.8	15.8	0.9
4. +Imports of mill products	68.6	91.4	54.5	40.1	32.2	18.0	33.9	36.6	24.8	35.0	34.0
5. +Recovery of secondary	28.4	22.4	18.9	16.4	13.5	8.2	10.8	10.3	10.9	10.3	8.6
6. −Exports of aluminum ingot	—	—	(a)	—	—	0.1	0.1	0.1	0.2	0.4	1.3
7. −Exports of mill products	1.4	3.5	3.7	3.4	4.1	2.7	1.7	1.2	3.0	1.8	0.9
8. =Apparent aluminum consumption	176.6	222.7	186.6	162.6	132.7	80.0	106.7	102.7	106.6	102.1	84.7
9. +Beginning inventory	5.0	2.2	1.7	2.0	2.8	4.8	2.2	1.3	1.6	3.8	8.5
10. −Ending inventory	14.8	5.0	2.2	1.7	2.0	2.8	4.8	2.2	1.3	1.6	3.8
11. =Inventory change	+9.8	+2.8	+0.5	−0.3	−0.8	−2.0	+2.6	+0.9	−0.3	−2.2	−4.7
12. =Aluminum consumption	166.8	219.9	186.1	162.9	133.5	82.0	104.1	101.9	107.0	104.3	89.4
13. ÷Mid-year population (mill.)	70.0	68.0	67.0	67.0	64.7	62.5	60.4	58.3	56.2	54.3	52.4
14. =Per capita consumption (lbs.)(1)	5.1	6.6	5.6	4.9	4.1	2.6	3.5	3.5	3.8	3.8	3.2
15. =Per capita consumption (lbs.)(2)	4.9	6.5	5.6	4.9	4.1	2.6	3.4	3.5	3.8	3.8	3.4

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(a) Less than .05 thousand short tons

SOURCE: Instituto del Aluminio, A.C.

Detail may not add to totals due to rounding.

THE NETHERLANDS

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	273.6	288.9r	284.6	281.7	285.8	261.1	274.4	284.0	272.8	200.0	179.3
3. +Imports of ingot	215.5	177.8	237.9	185.0	160.4	178.9	178.7	133.8	175.0	106.7	71.8
4. +Imports of mill products	116.2	101.9	124.9	117.4	91.5	101.1	104.8	64.3	80.8	82.8	61.8
5. +Recovery of secondary	55.0	55.3r	58.9	51.4	48.5	45.9	42.4	37.8	na	na	3.7
6. −Exports of aluminum ingot	386.7	388.0	402.7	396.2	324.5	348.5	320.0	291.2	324.1	213.5	169.5
7. −Exports of mill products	92.7	95.3	108.8	97.3	74.6	84.5	88.6	60.2	74.0	77.4	57.9
8. =Apparent aluminum consumption	180.9	140.3	194.8	142.0	187.0	153.9	191.7	168.4	130.5	98.6	89.2
9. +Beginning inventory(3)	8.6	11.4	8.7	48.2	39.0	59.7	70.9	23.3	29.4	32.8	—
10. −Ending inventory(3)	10.6	9.6	11.4	8.5	66.1	38.9	62.2	65.7	43.5	31.5	—
11. =Inventory change	+2.0	−1.8	+2.6	−39.8	+27.2	−20.8	−8.7	+42.4	+14.1	−1.3	—
12. =Aluminum consumption	178.9	142.1r	192.1	181.8	159.8	174.7	200.4	126.0	116.4	99.9	—
13. ÷Mid-year population (mill.)	14.3	14.2	14.1	14.0	13.9	13.9	13.8	13.7	13.6	13.5	13.3
14. =Per capita consumption (lbs.)(1)	25.4	19.8r	27.6	20.3	26.9	22.0	27.8	24.7	19.2	14.6	13.4
15. =Per capita consumption (lbs.)(2)	24.9	20.1	27.2	26.0	23.0	25.1	29.1	18.3	17.1	14.8	—

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(3) Primary Metal only

na Not available
r—Revised

SOURCE: Vereniging Netherlands Aluminium Institut

NEW ZEALAND

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	179.8	170.1	170.3	169.9	165.2	158.3	152.6	119.0	120.2	127.5	95.8
3. +Imports of ingot	8.0	3.7	—	—	—	—	—	1.4	1.3	2.9	8.6
4. +Imports of mill products	3.4	2.9	2.7	3.7	3.1	3.7	2.3	4.4	9.7	5.7	2.4
5. +Recovery of secondary (e)	3.0	3.3	2.2	2.2	2.0	2.0	1.7	1.3	2.3	2.1	1.9
6. −Exports of ingot	154.7	138.3	139.1	130.7	147.8	134.4	119.2	106.2	110.6	95.7	63.5
7. −Exports of mill products	8.5	6.3	5.9	3.0	2.1	1.3	0.5	0.2	0.1	0.2	0.1
8. =Apparent aluminum consumption	31.1	35.4	30.2	42.0	20.3	28.2	36.9	19.8	22.8	42.3	45.1
11. ±Inventory change	+6.6	+3.3	+3.6	+12.2	−6.4	+0.6	+4.7	−3.5	−18.5	+8.2	+25.9
12. =Aluminum consumption	24.5	32.1	26.6	29.8	26.7	27.6	32.2	23.4	41.3	34.2	19.2
13. ÷Mid-year population (mill.)	3.16	3.13r	3.10	3.15	3.13	3.13	3.12	3.09	3.03	2.97	2.91
14. =Per capita consumption (lbs.)(1)	19.6	22.5r	19.5	26.7	13.0	18.1	23.7	12.8	15.1	28.5	31.0
15. =Per capita consumption (lbs.)(2)	15.4	20.5r	17.2	19.0	17.1	17.6	20.7	15.1	27.3	23.0	13.2

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Comalco Limited, and New Zealand Dept. of Statistics

NICARAGUA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	na	na	na	na	0.6	1.3	0.6	0.5	0.4	0.4	0.2
4. +Imports of mill products	na	na	na	na	1.0	1.4	1.0	1.2	1.5	0.8	0.9
6. −Exports of mill products	na	na	na	na	0.9	1.1	0.3	0.1	*	*	0.1
8. =Apparent aluminum consumption	na	na	na	na	0.7	1.5	1.2	1.5	1.9	1.1	1.0
13. ÷Mid-year population (millions)	na	na	na	na	2.4	2.3	2.2	2.2	2.1	2.0	2.0
14. =Per capita consumption(1)	na	na	na	na	0.5	1.3	1.0	1.4	1.8	1.1	1.0

NOTES:
(1) Without inventory change

na Not received at publication time
** Less than .05 thousand short tons*
Detail may not add to totals due to rounding.

SOURCE: Ministerio de Economia Industria y Comercio, Managua

Per Capita Aluminum Consumption—Continued

Thousands of short tons

NORWAY

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	711.1	701.2	729.7	742.4	724.1	702.1	684.3	655.9	714.8	681.1	600.2
3. +Imports of ingot	23.1	16.3	18.1	9.8	8.8	9.4	35.0	21.3	30.7	35.7	39.2
4. +Imports of mill products	41.0	42.4	46.9	33.0	37.9	44.5	31.2	29.9	32.7	19.1	16.5
5. +Recovery of secondary	3.1	3.1	3.9	4.0	4.4	4.4	5.5	7.7	8.6	8.2	6.7
6. −Exports of ingot	601.2	577.6	574.5	623.1	694.6	612.1	619.1	497.8	611.1	634.9	591.8
7. −Exports of mill products	84.7	82.6	78.9	80.1	67.3	52.2	59.6	47.0	50.1	67.0	56.2
8. =Apparent aluminum consumption	92.3	102.9	145.1	85.9	13.4	96.2	77.3	170.0	125.6	42.2	14.7
11. ±Inventory change	−31.3	+17.4	+42.7	−20.4	−78.7	−5.7	−34.2	+82.6	+22.3	−33.4	−58.4
12. =Aluminum consumption	123.6	85.5	102.4	106.3	92.1	101.9	111.5	87.4	103.3	75.6	73.1
13. ÷Mid-year population (mill.)	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9
14. =Per capita consumption (lbs.)(1)	45.0	50.2	70.8	43.0	6.8	48.1	38.7	85.0	62.8	21.1	7.5
15. =Per capita consumption (lbs.)(2)	49.8	41.7	50.0	53.1	46.1	50.9	55.8	43.6	51.6	37.8	37.5

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Skan Aluminium

PANAMA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	1.3	1.7	1.8	1.5	1.0	1.1	1.8	1.7	2.5	2.2	1.8
4. +Imports of mill products	0.1	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4
5. +Recovery of secondary	0.7	0.6	0.4	0.4	0.3	0.6	0.4	0.3	0.4	0.4	0.3
7. −Exports of mill products	0.3	0.2	0.3	0.3	0.2	0.4	0.3	0.2	0.3	0.3	0.3
8. =Apparent aluminum consumption	1.8	2..	2.0	1.9	1.4	1.7	2.2	2.1	3.0	2.7	2.2
13. ÷Mid-year population (mill.)	2.0	2.0	2.0	1.9	1.9	1.8	1.7	1.6	1.6	1.6	1.5
14. =Per capita consumption (lbs.)(1)	1.8	2.2	2.0	2.0	1.5	1.8	2.6	2.6	3.8	3.4	2.9

NOTES:
(1) Without inventory change

SOURCE: Aluminio de Panama, S.A.

REPUBLIC of the PHILIPPINES

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	20.4	11.5	19.4	31.3r	18.5r	18.7r	19.2r	6.8	20.3r	16.9r	12.6r
4. +Imports of mill products	15.0	4.9	6.0	7.6r	4.7r	4.0r	2.5r	5.0r	2.4r	2.0r	1.4r
6. −Exports of ingot	*	*	1.0	1.1r	—r	—r	0.2r	0.1r	—r	—r	—r
7. −Exports of mill products	5.1	3.2	3.3	1.0r	2.1r	0.9r	0.3r	1.9r	4.6r	3.1r	1.4r
8. =Apparent aluminum consumption	30.3	13.2	21.1	36.8r	21.1r	21.8r	21.2r	9.8r	18.1r	15.8r	12.6r
13. ÷Mid-year population (mill.)	50.7	49.5	48.3	47.1r	45.9r	44.7r	43.5r	42.2r	41.3r	40.1r	39.0r
14. =Per capita consumption (lbs.)(1)	1.2	0.5	0.9	1.6	0.9r	1.0r	1.0r	0.5r	0.9r	0.8r	0.6r

NOTES:
(1) Without inventory change
r—Revised

SOURCE: National Census and Statistics Office, Philippines

Detail may not add to totals due to rounding.

PORTUGAL

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	na	44.0	23.4	19.2	17.5	9.3	6.3	2.9	2.9	1.8	1.7
4. +Imports of mill products	na	19.7	25.2	21.7	23.1	29.1	22.0	13.4	35.0	23.9	25.6
5. +Recovery of secondary	na	2.2	2.9	4.2	3.4	2.3	2.2	2.2	2.3	1.8	1.6
6. −Exports of aluminum ingot	na	0.3	0.2	0.9	0.1	0.1	0.1	—	(a)	(a)	—
7. −Exports of mill products	na	12.6	13.2	11.2	15.0	6.9	3.3	5.6	4.1	4.1	2.9
8. =Apparent aluminum consumption	na	53.0	38.0	33.0	28.9	33.7	27.1	12.9	36.1	23.4	26.0
13. ÷Mid-year population (mill.)	na	9.9	9.9	9.8	9.8	9.7	9.7	9.4	9.1	9.0	9.0
14. =Per capita consumption (lbs.)(1)	na	10.7	7.7	6.7	5.9	6.9	5.6	2.7	7.9	5.2	5.8

NOTES:
(1) Without inventory change
(a) Less than .05 thousand short tons
na Not received at publication time

** Including the Azores and Madeira*

SOURCE: National Statistical Institute, Lisbon

EL SALVADOR

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	1.0	1.4	1.8	2.6	2.7	2.2	1.9	1.4	1.2	1.1	1.0
4. +Imports of mill products	—	0.9r	0.4	1.3	2.2	0.7	1.9	0.7	1.8	2.3	1.4
5. +Recovery of secondary	0.8	0.7r	0.8	1.0	1.1	1.9	0.8	0.6	0.5	0.4	0.4
7. −Exports of mill products	0.7	1.4	2.1	2.6	3.6	2.9	2.3	1.8	2.6	2.7	2.0
8. =Apparent consumption	0.9	1.4	1.0	2.2	2.3	0.9	2.2	0.8	0.9	1.2	0.8
13. ÷Mid-year population (mill.)	1.5	4.6	4.5	4.4	4.4	4.3	4.1	4.0	3.9	3.9	3.8
14. =Per capita consumption (lbs.)(1)	0.6	0.6	0.4	1.0	1.0	0.4	1.1	0.4	0.5	0.6	0.4

NOTES:
(1) Without inventory change
e – estimated
r—Revised

SOURCE: Aluminio de Centro America, S.A.

KINGDOM OF SAUDI ARABIA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary production	*	*	—	—	—	—	—	—	—	—	—
3. +Imports of ingot	5.7	88.5	80.9	58.7	51.2	40.6	12.3	6.4	6.0	na	na
4. +Imports of mill products	31.7	13.4	15.4	13.6	13.4	10.4	5.8	3.5	2.2	na	na
6. −Exports of ingot	—	4.2	1.9	0.6	0.4	0.5	*	0.1	*	—	—
7. −Exports of mill products	0.6	*	0.2	0.5	0.2	0.6	0.1	0.2	*	na	na
8. =Apparent consumption	36.8	97.7	94.2	71.3	63.9	49.9	18.0	9.5	8.1	na	na
13. ÷Mid-year population (mill.)	7.8	7.8	7.6	7.5	7.3	7.1	6.9	6.7	6.5	na	na
14. =Per capita consumption (lbs.) (1)	9.4	25.1	24.8	19.0	17.5	14.1	5.2	2.8	2.5	na	na

NOTES:
(1) Without inventory change
** less than 50 tons*
na not available

SOURCE: Saudi Basic Industries Corp.

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

Thousands of short tons

SINGAPORE

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
3. +Imports of ingot	12.1	8.8	9.9	6.6	8.8	4.4	4.4	1.1	3.3	3.3	1.1
4. +Imports of mill products	30.9	29.8	23.1	25.4	17.6	15.4	12.1	8.8	14.3	14.3	11.0
6. −Exports of ingot	6.6	3.3	4.4	3.3	4.4	1.1	1.1	—	—	—	—
7. −Exports of mill products	7.7	4.4	4.4	4.4	4.4	1.1	1.1	1.1	1.1	1.1	1.1
8. =Apparent consumption	28.7	30.9	24.3	24.3	17.6	17.6	14.3	8.8	16.5	16.5	11.0
13. ÷Mid-year population (mill.)	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2
14. =Per capita consumption (lbs.) (1)	23.0	25.3	20.1	20.4	15.0	15.1	12.5	7.8	14.8	15.0	10.2

NOTES:
(1) Without inventory change

SOURCE: Department of Statistics, Singapore

SOUTH AFRICA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	116.6	92.3	94.8	93.8	87.6	85.3	85.4	82.8	80.0	59.9	49.6
3. +Imports of ingot	0.8	2.0	0.3	0.7	0.7	0.4	0.7	1.4	0.9	1.0	1.3
4. +Imports of mill products	11.9	13.2	12.2	7.8	7.2	6.5	10.7	13.2	12.7	8.0	8.6
5. +Recovery of secondary	30.0	31.2	30.0	18.2	11.2	10.6	5.3	6.1	6.7	6.0	5.6
6. −Exports of ingot	27.1	3.2	14.2	36.5	42.4	32.1	17.0	21.1	16.1	5.7	0.3
7. −Exports of mill products	1.0	1.2	3.6	1.9	2.3	2.8	3.3	2.6	3.0	2.1	2.2
8. =Apparent aluminum consumption	131.2	132.4	119.5	82.1	62.0	68.0	81.8	79.8	81.2	67.0	62.6
11. ±Inventory change	+13.6	+4.1	+0.4	+0.9	−7.9	−1.1	+4.1	+0.7	+0.1	−1.8	−2.6
12. =Aluminum consumption	117.6	128.3	119.0	81.2	69.9	69.1	77.7	79.1	81.1	68.8	65.3
13. ÷Mid-year population (mill.)	26.2(3)	25.6(3)	24.1(3)	28.2	27.3	26.7	26.1	25.5	24.9	24.3	23.7
14. =Per capita consumption (lbs.)(1)	9.9	10.3	9.9	5.8	4.6	5.1	6.3	6.3	6.5	5.5	5.3
15. =Per capita consumption (lbs.)(2)	9.0	10.0	9.9	5.8	5.1	5.2	6.0	6.2	6.5	5.7	5.5

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(3) Estimate: Population excludes independent homelands—Republics of Transkei, Bophutatswanda and Venda.

SOURCE: Non-Ferrous Metals Industries Association and Hulletts Aluminium Ltd.

SPAIN

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	404.0(a)	437.2	426.0	286.5	233.9	233.5	231.8	233.1	210.5	176.4	159.8
3. +Imports of aluminum ingot	17.1(a)	15.0	3.5	7.9	41.8	40.6	15.9	31.5	30.2	28.1	34.2
4. +Imports of mill products	na	23.5	26.5	22.4	17.5	27.9	15.1	14.5	19.7	13.8	11.5
6. −Exports of aluminum ingot	191.4(a)	179.3	117.7	47.3	6.4	9.9	11.9	2.6	2.8	1.3	1.4
7. −Exports of mill products	na	43.0	50.0	53.1	30.9	33.1	31.7	31.5	24.3	22.4	24.7
8. =Apparent aluminum consumption	na	253.3	288.3	216.4	256.0	258.9	219.1	245.0	233.5	194.6	179.3
11. ±Inventory change	na	+36.9	+23.1	−20.5	+26.5	+3.0	−22.0	+38.6	−7.7	−16.5	+9.9
12. =Aluminum consumption	216.1(a)	213.1	265.1	236.9	229.5	256.0	241.2	206.5	241.2	211.1	169.4
13. ÷Mid-year population (mill.)	38.5	37.7	37.4	37.1	36.8	36.4	36.0	35.6	35.2	34.8	34.5
14. =Per capita consumption (lbs.)(1)	na	13.4	15.4	11.7	13.9	14.2	12.2	13.8	13.3	11.2	10.4
15. =Per capita consumption (lbs.)(2)	11.2e	11.3	14.2	12.8	12.5	14.1	13.4	11.6	13.7	12.1	9.8

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
na Not received at publication time
(a) Source: World Bureau of Metal Statistics

SOURCE: Aluminio De Galicia, S.A.

Detail may not add to totals due to rounding.

SWEDEN

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	87.0	91.3	89.9	90.4	90.4	91.0	89.7	85.3	90.9	91.3	85.5
3. +Imports of ingot	50.2	42.7	40.7	40.5	37.7	47.8	51.5	37.1	49.6	39.1	31.6
4. +Imports of mill products	81.6	69.4	71.0	72.1	60.7	65.4	70.5	60.6	59.9	55.4	44.9
5. +Recovery of secondary	25.6	27.2	27.0	26.5	27.7	27.0	26.5	37.9	39.5	34.5	29.9
6. −Exports of aluminum ingot	38.8	41.7	19.5	21.6	42.4	35.8	14.7	6.3	10.8	18.2	12.7
7. −Exports of mill products	51.0	47.4	51.9	63.7	59.1	51.1	46.8	33.6	52.8	45.7	36.6
8. =Apparent aluminum consumption	154.4	141.5	157.2	144.1	115.0	144.3	176.7	181.1	176.3	156.4	142.6
11. =Inventory change	−7.4	+0.3	+14.3	−8.9	−20.4	+1.3	+9.5	+17.7	+2.2	−7.6	+4.7
12. =Aluminum consumption	161.8	141.2	142.9	153.0	135.4	143.0	167.2	163.4	174.1	164.0	137.9
13. ÷Mid)year population (mill.)	8.3	8.3	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.1	8.1
14. =Per capita consumption (lbs.)(1)	37.0	34.1	37.9	34.7	27.7	34.8	43.1	44.2	43.0	38.6	35.2
15. =Per capita consumption (lbs.(2)	38.8	34.0	34.4	36.9	32.6	34.5	40.8	39.8	42.5	40.5	34.0

NOTES:
Revised to reflect inventory changes and other data revisions
(1) Without inventory change
(2) Adjusted for inventory change
na Not available at publication time

SOURCE: National Central Bureau of Statistics, Sweden, and Granges Aluminium

SWITZERLAND

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	83.0	90.9	95.1	91.5	87.7	88.0	86.2	86.9	95.9	94.1	92.2
3. +Imports of ingot	52.2	39.8	58.2	43.7	37.4	43.2	34.3	17.7	45.8	32.3	27.4
4. +Imports of mill products	51.9	52.8	56.9	47.0	39.8	34.5	27.0	18.5	28.9	23.9	13.3
5. +Recovery of secondary	20.6	22.7	21.4	21.2	19.7	22.2	19.6	16.4	19.0	18.3	15.4
6. −Exports of ingot	28.0	25.0	25.1	29.1	19.4	18.1	21.0	12.9	12.6	26.4	23.4
7. −Exports of mill products	77.7	72.8	79.4	84.4	74.1	77.6	64.7	50.0	56.6	49.4	39.7
8. =Apparent aluminum consumption	102.1	108.1	127.1	89.9	91.1	92.2	81.4	76.6	120.4	92.8	85.3
11. ±Inventory change	−4.6	−0.8	+6.5	−7.4	−1.1	+2.1	−6.5	+5.5	+8.8	−6.6	−4.1
12. =Aluminum consumption	106.7	108.9	120.7	97.2	92.2	90.1	87.9	71.1	111.6	99.4	89.4
13. ÷Mid-year population (mill.)	6.4	6.4	6.4	6.2	6.2	6.3	6.3	6.4	6.4	6.4	6.4
14. =Per capita consumption (lbs.)(1)	32.0	33.8	39.7	29.0	29.4	28.3	25.8	23.9	37.7	29.0	26.7
15. =Per capita consumption (lbs.)(2)	33.3	34.0	37.7	31.4	29.8	28.6	27.9	22.2	34.9	31.1	27.9

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Swiss Aluminium Ltd. and European Primary Aluminium Assn.

TAIWAN, REPUBLIC OF CHINA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	11.0	33.1	68.9	61.9	55.6	32.8	28.1	30.9	34.5	38.7	35.4
3. +Imports of ingot	97.7	52.6	64.3	58.3	52.5	57.9	40.1	12.7	20.2	16.2	6.9
4. +Imports of mill products	16.5	10.7	10.6	12.5	8.0	6.4	6.8	2.2	5.6	2.9	2.0
5. +Recovery of secondary(1)	17.1	18.5	21.2	15.2	10.5	9.6	6.8	6.5	9.0	14.6	4.4
6. −Exports of ingot	0.7	—	*	*	0.4	0.1	0.3	1.6	5.0	0.1	0.6
7. −Exports of mill products	15.4	21.2	19.0	16.6	8.2	4.0	4.0	4.1	3.2	6.3	10.6
8. =Apparent aluminum consumption	126.2	93.7	145.9	131.3	117.9	102.6	77.5	46.6	61.1	65.4	37.5
11. ±Inventory change	+1.0	−37.0	+26.3	+0.1	+8.6	+15.3	+6.6	−8.4	+9.1	+5.2	+1.0
12. =Aluminum consumption	125.2	130.7	119.6	131.2	109.3	87.3	70.9	55.0	52.0	60.2	36.5
13. ÷Mid-year population (mill.)	18.3	18.0	17.8	17.5	17.0	16.7	16.3	16.0	15.7	15.4	15.1
14. =Per capita consumption (lbs.)(2)	13.9	10.4	16.4	15.0	13.9	12.3	9.5	5.8	7.8	8.5	5.0
15. =Per capita consumption (lbs.)(3)	13.7	14.5	13.4	15.0	12.8	10.5	8.7	6.9	6.6	7.8	4.8

NOTES:
(1) Recovery of imported scrap only
(2) Without inventory change
(3) Adjusted for inventory change
** Less than 50 tons.*

SOURCE: Taiwan Aluminium Corporation

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption

Thousands of short tons

TURKEY

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	35.8(a)	44.5	37.0	37.6	44.9	51.6	45.2	18.0	—	—	—
3. +Imports of ingot	38.6	37.7r	12.3	14.3	12.3	45.1	29.7	57.0	55.4	44.5	34.8
4. +Imports of mill products	9.5	5.4	4.0	8.0	1.9	3.3	4.3	3.2	2.8	7.4	11.9
6. −Exports of ingot	—	—	—	—	—	—	—	—	—	—	—
7. −Exports of mill products	17.0	10.4	6.5	6.4	6.8	10.8	9.7	3.5	24.4	4.6	0.7
8. =Apparent aluminum consumption	66.9	67.0r	46.8	53.6	52.2	89.2	69.4	74.7	33.8	47.3	46.0
13. ÷Mid-year population (mill.)	47.5	46.0	44.4	43.5	42.6	41.8	40.9	40.0	39.0	38.1	37.1
14. =Per capita consumption (lbs.)(2)	2.8	2.2	2.1	2.5	2.5	4.3	3.4	3.7	1.7	2.5	2.5

NOTES:
(2) Without inventory change
na Not available at publication time
** Less than 50 tons.*
e — estimated
(a) Source: World Bureau of Metal Statistics

SOURCE: State Institute of Statistics, Ankara, Turkey

UNITED KINGDOM

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	265.4	373.9	412.8	396.2	381.6	384.6	368.6	339.8	323.1	277.3	188.9
3. +Imports of ingot	164.6	135.9r	186.7	200.7	204.1	217.6	240.2	176.6	309.4	316.5	294.2
4. +Imports of mill products	221.1	173.5r	159.8	197.8	174.0	143.6	123.6	82.7	114.3	101.5	93.7
5. +Recovery of secondary	119.5	155.1	165.3	176.3	192.0	200.9	207.0	184.2	208.2	208.7	203.7
6. −Exports of ingot	131.7	185.7r	208.2	220.5	171.4	157.3	174.4	96.7	96.4	89.1	93.7
7. −Exports of mill products	102.5	85.5r	112.0	78.5	66.0	70.8	65.7	59.5	76.1	62.6	42.9
8. =Apparent aluminum consumption	536.4	567.1r	604.3	672.1	714.3	718.7	699.5	627.1	782.5	752.3	643.9
11. ±Inventory change	−26.3	−13.6	+1.5	+55.0	−29.1	−20.2	−1.4	+17.7	+12.6	−16.6	−33.1
12. =Aluminum consumption	562.7	580.7r	602.7	617.1	743.4	738.9	701.0	609.4	769.9	768.9	677.0
13. ÷Mid-year population (mill.)	56.0	56.0r	55.9	55.9	55.8	55.9	55.9	56.1	56.2	55.9	55.8
14. =Per capita consumption (lbs.)(1)	19.2	20.3r	21.6	24.0	25.6	25.7	25.0	22.4	27.8	26.9	23.1
15. =Per capita consumption (lbs.)(2)	20.1	20.7r	21.6	22.1	26.6	26.4	25.1	21.7	27.4	27.5	24.3

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change

SOURCE: Aluminium Federation Ltd.

UNITED STATES of AMERICA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	3,608.6	4,947.9	5,129.7	5,023.1	4,803.8	4,538.7	4,251.4	3,879.1	4,903.5	4,529.1	4,122.4
2. ±Govt. stockpile adjustment	—	—	—	—	—	—	9.2	2.5	510.5	730.2	6.1
3. +Imports of ingot	679.4	710.7	580.7	570.8	757.8	670.3	575.4	434.1	508.9	508.0	659.4
4. +Imports of mill products	227.8	152.0	84.0	213.2	242.2	82.4	94.5	65.1	54.9	69.1	94.5
5. +Recovery of secondary	2,000.0	1,973.0r	1,738.0	1,777.0	1,673.0	1,605.0	1,471.0	1,236.0	1,282.0	1,230.0	1,126.0
6. −Exports of ingot	401.1	344.2r	714.9	200.7	126.6	97.8	152.4	185.9	207.8	229.6	108.3
7. −Exports of mill products	246.2	340.8r	381.7	310.8	247.1	258.3	257.9	216.6	255.7	233.0	167.7
8. =Apparent aluminum consumption	5,868.5	7,098.6r	6,435.8	7,072.6	7,103.1	6,540.3	5,991.2	5,214.3	6,796.3	6,603.8	5,732.4
9. +Beginning inventory	3,303.3	2,538.0	2,562.6	2,747.0	2,853.2	2,850.4	2,999.4	2,578.0	2,183.0	2,430.6	2,513.1
10. −Ending inventory	3,099.7	3,303.3r	2,538.0	2,562.6	2,747.0	2,853.2	2,850.4	2,999.4	2,578.0	2,183.0	2,430.6
11. −Inventory change	−203.6	+765.3r	−24.6	−184.4	−106.2	+2.8	−149.0	+421.4	+395.0	−247.6	−82.5
12. −Aluminum consumption	6,072.1	6,333.3r	6,460.4	7,257.0	7,209.3	6,537.5	6,140.2	4,792.9	6,401.3	6,851.4	5,814.9
13. ÷Mid-year population (millions)	231.5	229.3	227.7	220.6	218.7	216.8	215.1	213.6	211.9	210.4	208.8
14. =Per capita consumption(1)	50.7	61.9r	56.5	64.1	65.0	60.3	55.7	48.8	64.1	62.8	54.9
15. =Per capita consumption(2)	52.5	55.2r	56.8	65.8r	65.9	60.3	57.1r	44.9	60.4	65.1	55.7

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
** Removal of less than 50 short tons*
r—Revised

SOURCE: The Aluminum Association, Inc.

Detail may not add to totals due to rounding.

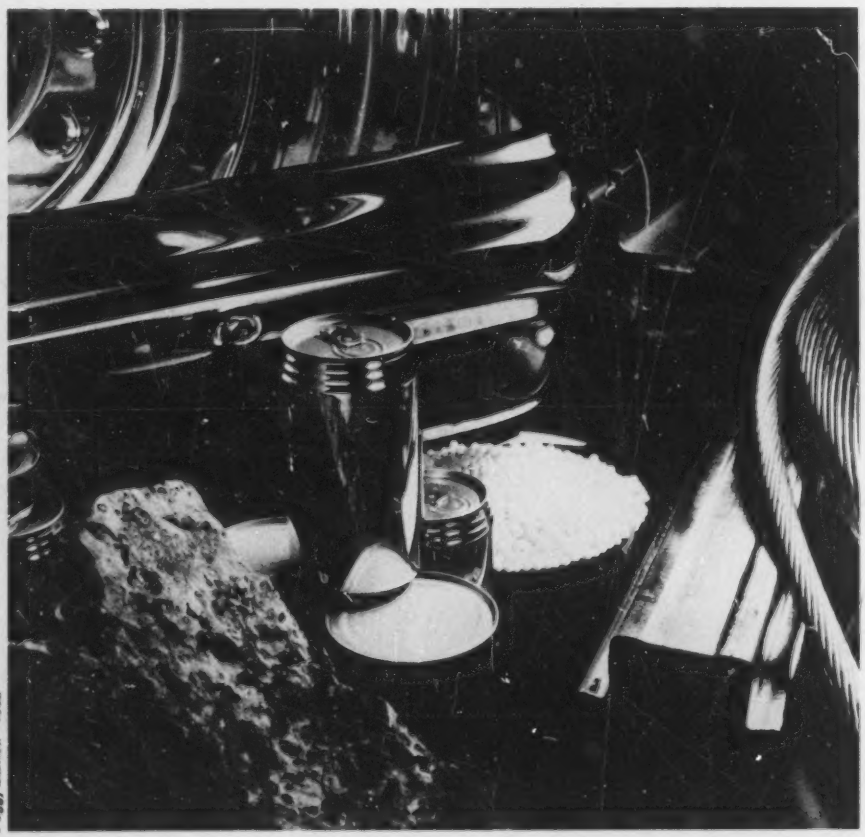
VENEZUELA

	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972
1. +Primary aluminum production	301.6	345.6	354.2	231.8r	74.0	47.8	51.2	49.5	43.2	27.7	25.3
3. +Imports of ingot	1.0	0.4	0.2	10.6r	—	8.7	2.2	0.2	—	1.8	0.1
4. +Imports of mill products	28.3	26.2	27.3	16.9r	29.9	17.0	10.5	5.2	2.1	4.3	4.4
5. +Recovery of secondary	11.0	11.0	11.0	11.2r	11.0	1.4	2.0	0.7	1.4	—	—
6. −Exports of ingot	229.8	263.4	239.5	136.0r	31.0	11.5	19.4	—	15.8	8.9	9.1
7. −Exports of mill products	0.2	26.9	40.9	25.4r	—	—	—	—	0.1	0.6	0.6
8. =Apparent aluminum consumption	111.9	92.9	112.3	109.1r	83.9	63.5	46.5	44.8	30.8	24.8	20.0
9. +Beginning inventory	53.8	28.0	22.3	11.1r	1.2	4.1	9.4	1.6	1.7	5.0	4.4
10. −Ending inventory	61.6	53.8	28.0	22.3r	11.2	6.1	3.5	8.1	1.6	2.8	5.0
11. ±Inventory change	+7.8	+25.8	+5.7	+9.0	+10.0	+2.0	−5.9	+6.5	−0.1	−2.1	+0.6
12. =Aluminum consumption	104.2	67.1	106.6	100.1r	74.0	61.5	52.4	38.3	30.9	26.9	19.4
13. ÷Mid-year population (mill.)	14.9	14.6	13.9	13.5	13.1	12.7	12.9	12.5	12.0	11.3	11.2
14. =Per capita consumption (lbs.)(1)	15.0	12.6	16.1	16.1r	12.8	10.0	7.2	7.2	5.1	4.4	3.6
15. =Per capita consumption (lbs.)(2)	13.9	9.0	15.2	14.8r	11.3	9.7	8.1	6.1	5.2	4.8	3.5

NOTES:
(1) Without inventory change
(2) Adjusted for inventory change
(a) Less than .05 thousand short tons

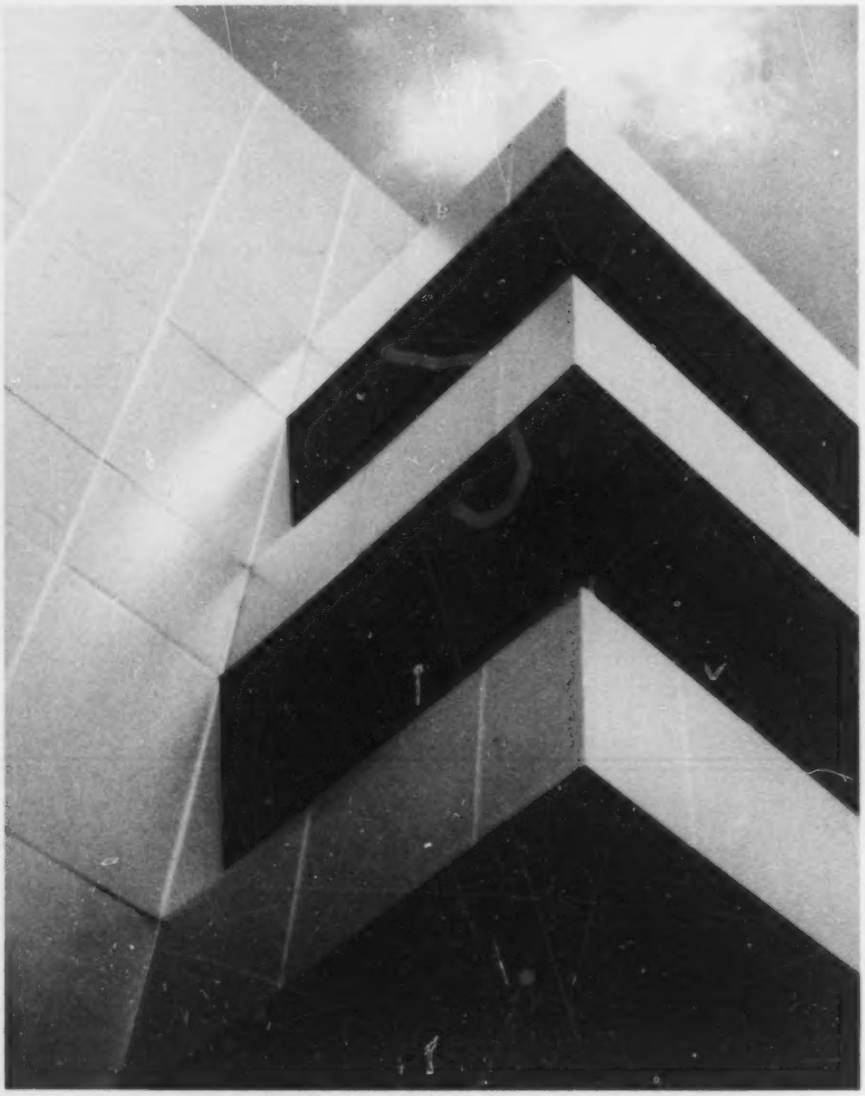
SOURCE: Aluminio del Caroni, S.A., Venezuela

Detail may not add to totals due to rounding.



Peggy Barnett—1982

From its bauxite origin to its final stage as versatile metal, aluminum touches our lives in many ways. Some of its applications in the automotive, wire and cable, packaging and chemical markets are shown here.



Low maintenance and resistance to weather are two of the features that make aluminum a popular material in the building and construction market.

ACSR AND ALUMINUM CABLE, BARE—Aluminum stranded conductor reinforced by a core of steel (ACSR), or aluminum (ACAR); or any other bare stranded aluminum conductor.

ATOMIZED POWDER—Powder produced by blowing or asperating molten metal through an orifice.

CASTING—A product made by pouring moulten metal into a mold of a desired shape and letting it harden.

CONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.375" or greater in diameter, produced by continous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into electrical conductor wire.

DIRECT MILL USES—Finished product applications supplied for the most part directly from mills rather than from distributors or jobber warehouses.

DRAWING STOCK (Redraw Rod)—See Conductor or Non Conductor Redraw Rod.

DRAWN TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, and brought to final dimensions by drawing.

DROSS AND SKIMMINGS—The mixture of oxides and other impurities which float to the surface of molten aluminum and is skimmed off.

EXTRUDED PIPE AND TUBE—A hollow product formed by extruding that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape.

EXTRUDED ROD AND BAR—A solid product produced by extruding (sometimes brought to final dimensions by drawing) that is long in relation to cross section, which is round, square, rectangular, hexagonal, or octagonal in shape and 0.375" or greater in diameter or in at least one perpendicular distance between parallel faces.

EXTRUDED SHAPES—A product produced by extruding, that is long in relation to its cross-sectional dimensions and has a cross section other than that of rod and bar and pipe and tube.

EXTRUSION INGOT (BILLET)—A solid or hollow cast form, usually cylindrical, suitable for extruding.

FLAKED POWDER—Powder consisting of flat or scale-like particles of a thickness small compared with other dimensions, produced by milling in the presence of a lubricant.

FOIL—A flat rolled product, rectangular in cross section, of thickness less than 0.006".

FORGINGS (EXCLUDING IMPACT EXTRUSIONS)—A product worked to a predetermined shape by one or more processes such as hammering, upsetting, pressing, rolling, etc.

GENERAL LINE DISTRIBUTOR—Warehouses and sells a number of mill products to a wide variety of customers.

IMPACTS (EXCLUDING COLLAPSIBLE TUBES AND CANS)—A product formed in a confining die from a metal slug, usually cold, by rapid simple stroke application of force through a punch, causing the metal to flow around the punch and/or through an opening in the punch or die.

INTEGRATED PRODUCER (OR SUPPLIER)—For statistical reporting, a company which produces primary aluminum ingot in the United States and produces mill products from it.

METALLURGICAL/DESTRUCTIVE USES—Applications wherein, because of the way it is used, aluminum either loses its identity or is lost and cannot be recovered. Major uses include the deoxidizing of steel and reduction of ferroalloys; steel and other nonferrous metal alloys; steel coating; and such other applications as chemicals and catalysts.

MILL PRODUCTS—Metal that has been fashioned into an intermediate or semifabricated form in preparation for making a finished product. Example: sheet, a mill product, is used to make residential siding, a finished product.

NET SHIPMENTS—Excludes intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

NONCONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.375″ or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into nonconductor wire.

NONINTEGRATED FABRICATOR (OR SUPPLIER)—For statistical reporting, a U.S. mill product fabricator which is not affiliated with a domestic primary ingot producer.

OTHER INGOT AND MOLTEN METAL, PRIMARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), shipped by an integrated producer or nonintegrated fabricator from a company-owned facility not exclusively devoted to producing secondary ingot.

OTHER INGOT AND MOLTEN METAL, SECONDARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), principally produced from aluminum scrap to specification by secondary smelters (or others at a facility exclusively devoted to producing ingot from scrap for sale); excludes remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

OTHER ROD AND BAR (CONTINUOUS-CAST OR ROLLED)—A solid, round, square, rectangular, hexagonal, or octagonal in shape produced by continuous casting or rolling, that is long in relation to cross section, 0.375″ or greater in diameter or in at least one perpendicular distance between parallel faces; other than redraw rod and D.C. cast ingot.

PASTE—A blend of powder or flake with a thinner or plasticizer.

PLATE, NONHEAT-TREATABLE—A flat rolled product, rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened only by cold work.

PLATE, HEAT-TREATABLE—A flat rolled product, in 2000, 6000, or 7000 alloy series (except 7072), rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened by a suitable thermal treatment.

POWDER—An aggregate of discrete particles of aluminum, substantially all of which are finer than 1,000 microns (minus 18 mesh).

RECEIPTS—The metal physically received by a company for further processing.

REIMPORTS—Mill products that have been exported, partially processed outside the United States, and imported back to the United States while still in a mill product stage.

ROLLED STRUCTURAL SHAPES—A structural shape produced by hot rolling.

SECONDARY SMELTER—A company whose facilities are exclusively devoted to producing ingot or molten aluminum from scrap.

SEMIFABRICATED PRODUCTS—See Mill Products.

SHEET, NONHEAT-TREATABLE—A rolled product, flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened only by cold work.

SHEET, HEAT-TREATABLE—A rolled product, in 2000, 6000, or 7000 alloy series (except 7072), flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened by a suitable thermal treatment.

STATISTICAL ADJUSTMENT—An adjustment made to product shipment data to account for net shipments of aluminum reported by the Bureau of the Census which are believed to be either over- or understated due to excessive or insufficient reporting of receipts. The addition of the statistical adjustment reconciles the amounts reported by the Bureau of the Census with the net shipments that the Aluminum Association feels are more correct.

WELDED TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, produced by forming and seam-welding sheet longitudinally.

WIRE, BARE, CONDUCTOR AND NONCONDUCTOR—A solid wrought product that is long in relation to its cross section, which is square, round, rectangular, hexagonal, or octagonal in shape, whose diameter or greatest perpendicular distance between parallel faces (except for flattened wire) is less than 0.375″.

WIRE AND CABLE, INSULATED OR COVERED—Aluminum electrical conductor wire or stranded conductors that are insulated or covered.

Publications

The following publications are available from the Aluminum Association, Inc.

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- U.S. Exports and Imports of Aluminum
- Aluminum Extrusion Press Directory
- Aluminum Statistical Review Historical Supplement
- U.S. Aluminum Industry Plant Directory
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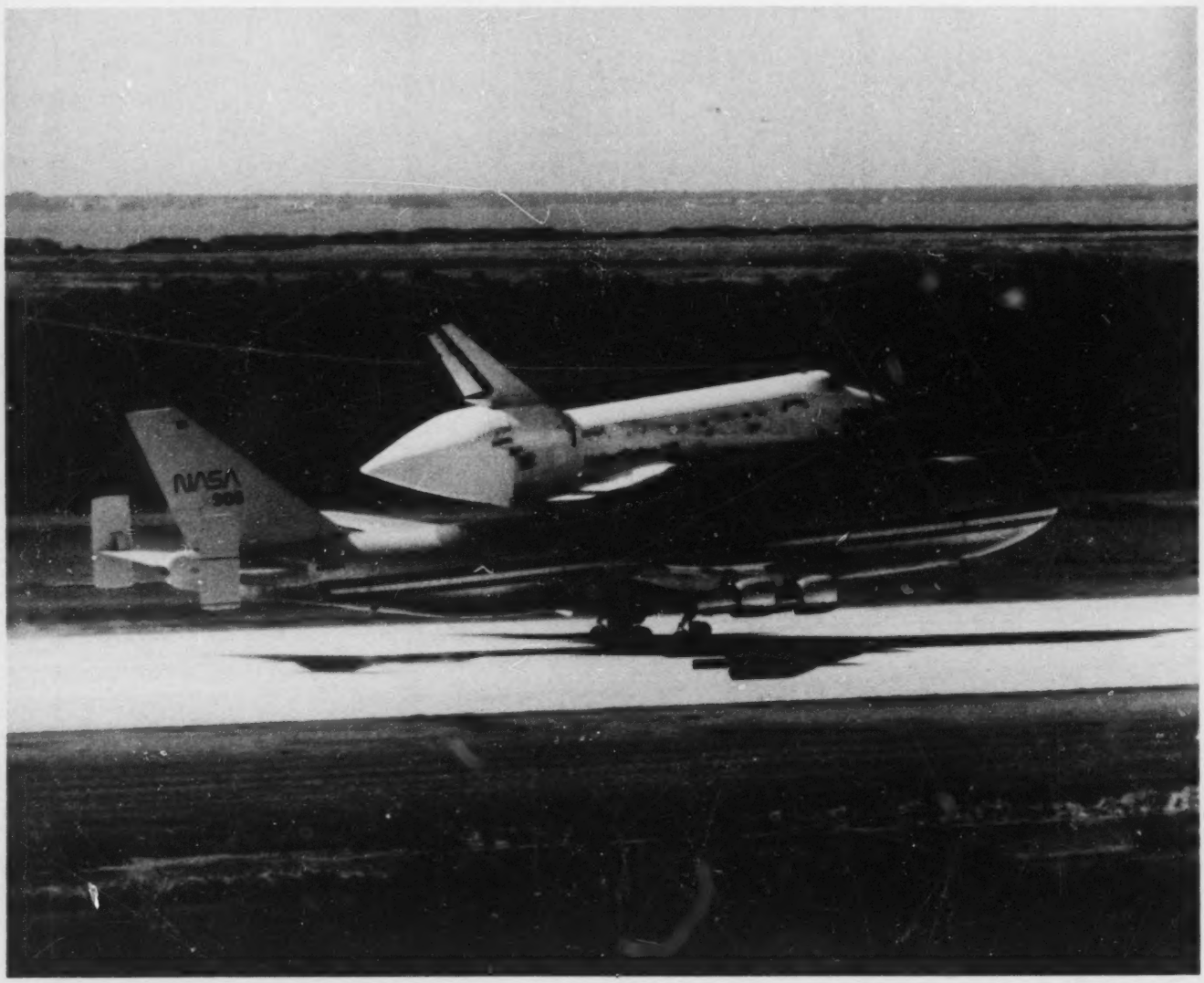
- About the Aluminum Association (a brochure)

Write to the Publications Department, the Aluminum Association, Inc., 818 Connecticut Avenue, N.W., Washington, D.C. 20006.



Aluminum's strength and light weight make it a natural for aerospace applications, such as the space shuttle Columbia. Aluminum powder is a key ingredient of the fuel used for launches.

the Aluminum Association
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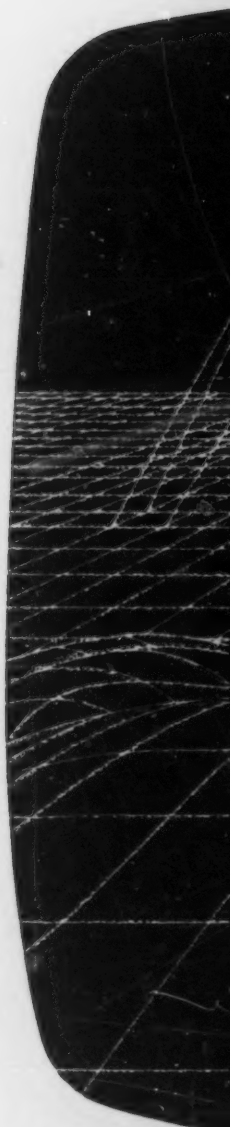

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